

# A review of the Rhadalinae (= Aplocneminae) (Coleoptera: Melyridae)

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## Synopsis

Thirteen world genera of Rhadalinae (Melyridae) are recognized here, of which three are included in the subfamily for the first time: *Antinea* Peyerimhoff, *Indiodasytes* Pic and *Hemipleurus* gen. n., erected for *H. floriger* sp. n. from Borneo. A generic key is given together with a diagnosis and type species citation for each genus. *Eurelymis* Casey (NW. America), from the Melyrinae, and *Celsus* Lewis (Japan), from the Dasytinae, are regarded as junior synonyms of *Semijulistus* Schilsky (Holarctic Region), *Cymbolus* Gorham is synonymized with *Rhadalus* LeConte and *Xamerpus* Fairmaire with *Malthacodes* Waterhouse. The two Indian species of *Aplocnemus* Stephens, *A. indicus* Champion and *A. moestus* Gorham, are transferred to *Malthacodes* Waterhouse. *Malthacodes parvus* nom. n. is proposed as a replacement name for *M. minutus* (Pic, 1931) [originally in *Xamerpus*] (nec Pic, 1906). Checklists of genera and species are provided. Distinguishing features are given for adult and larval Melyridae and Rhadalinae and comments are made on the biology of the latter.

## Introduction

The Melyridae (sensu Crowson, 1964 and Lawrence, 1982) is the largest family in the superfamily Cleroidea, with at least 200 genera. Crowson (1964) considered it to be divisible into five subfamilies: the Rhadalinae (Aplocneminae), the Melyrinae, the Malachiinae, the Prionocerinae and the Dasytinae. These subfamilies have all, at one time or another, been given family rank and some are currently considered as such by recent authors (e.g. Constantin, 1965; Liberti, 1984; Wittmer, 1984 etc.). In spite of its size the family has been poorly studied in recent years, except for the subfamily Malachiinae which has been the subject of extensive studies by Wittmer (1930 *et seq.*). At the beginning of the century and before, there were several prolific writers whose unco-ordinated descriptive efforts, mainly at specific level, caused a certain amount of taxonomic confusion in the family.

The first author to create some order out of this confusion was Crowson who, in his major work on the higher classification of Coleoptera (1955) and in subsequent works (1964, 1970), keyed out and defined the superfamilies, families and subfamilies. Since then, Majer (1987) has produced a useful work completely revising the phylogeny and taxonomy of the family. He introduced new taxa, divided the family into subfamilies, supertribes and tribes and discussed in detail the supposed phylogeny of the group.

In the course of his study of the Melyridae, Crowson (1964) discovered a distinctive group of genera whose close relationship had been hitherto overlooked and for which he erected a new subfamily, the Aplocneminae. This included genera from the melyrid subfamilies Melyrinae and Dasytinae, the Cleridae and the Rhadalidae (*Coleopterorum Catalogus*, Pic, 1929, 1937; Corporaal, 1950; Pic, 1926). However, Crowson overlooked the fact that a family group name (Rhadalidae) was already in use for one of his included genera: *Rhadalus* LeConte. The name Rhadalinae therefore has priority (Article 23(a), *International Code of Zoological Nomenclature*, 1985) and is employed here.

These discoveries, along with some additional genera, nomenclatural changes, new generic synonymies and the erection of a new genus, indicated the need for a review of the entire subfamily and hence this study.

In the present paper Crowson's (1964) treatment of the subfamily is reappraised, decisions concerning the status of the included genera being based on the study of their type species (something that Crowson failed to do). As a result 12 of the 25 nominal genera are regarded as valid and one additional genus is described as new.

Although the Rhadalinae comprises only 13 (out of 25 nominal) genera, its distribution is almost world-wide. The group seems to be restricted mainly to semi-dry forested, mountainous or hilly areas, although some species have been collected on sea beaches. The adult beetles are found on flowers, shrubs or on the leaves or bark of coniferous or deciduous trees and although most are carnivorous to a certain extent, some are pollinivorous or both carnivorous and pollinivorous. The subfamily is well defined, all of its species exhibiting the unusual feature of the connation of the first two visible abdominal sternites. This feature is found in no other group of Melyridae nor in other cleroid families. Its other unusual and notable feature is the sclerite articulated to the (morphologically) dorsal side of the median lobe of the aedeagus. This sclerite articulates at its basal end with the median lobe in a hinge-like joint, and is freely moveable in all the genera examined except *Microjulistus*, in which it appears to be fused at the base to the median lobe. The only genus in the group lacking this sclerite (or appendage) is the Indian *Indiodasytes*.

### MELYRIDAE Leach, 1815<sup>1</sup>

#### Distinguishing features

**Adults.** Adult Melyridae are generally distinguished from related families by the following characters: antennae usually 11-segmented and serrate or filiform, but sometimes pectinate or with some basal segments modified, apical segments not differentiated to form a club; claws either simple, split, toothed or with membranous appendages; front coxal cavities open behind, coxae large and projecting, with exposed trochantins; tarsi 5-segmented, sometimes 4,5,5 in male [exception *Anthriboclerus*, 4,4,4] and without strongly lobed segments; prothorax usually with distinct side margins; elytra without striae (except in some *Melyris* spp. which also have costae); sometimes with exsertile vesicles at anterior angles of prothorax and abdominal pleura; abdomen with 6 visible sternites which are usually free but occasionally with the first two connate; aedeagus with undivided tegmen.

**Larvae.** Melyrid larvae can be distinguished from those of all other cleroid families [except Phycosecidae] by the following characters: head with a well-marked median epicranial suture and no endocarina; mouthparts retracted, stipes much longer than cardo; spiracles annuliform (Crowson, 1970); mandible with a long, stiff prosthecal process near the middle or at the base of inner margin (Böving & Craighead, 1930). They differ from Phycosecidae in possessing 1–5 ocelli on each side instead of 6. [The larvae of other cleroid families have the following characters: head rarely with a distinct median cranial suture, but if so,

<sup>1</sup> *Fide* Watt (1975: 33). Pic (1937: 3) and Majer (1987: 784) give Olivier, 1790 as author but there is no family group name in that work.

then with mouthparts strongly protracted and stipes not longer than cardo; endocarina usually distinct; spiracles usually bicameral; mandible either without a prosthecal process or with a short one.]

### RHADALINAE LeConte

Rhadalini LeConte, 1861: 191, 194; LeConte & Horn, 1883: 213, 216.

'Haplocnemates' Mulsant & Rey, 1868: 181.

Rhadalinae LeConte; Casey, 1895: 457; Blaisdell, 1938: 3; Hatch, 1962: 86; Arnett, 1968: 609, 611, 613; Blackwelder, 1975: R67.10.

Rhadalidae LeConte; Pic, 1926a: 3; Crowson, 1964: 315, 320.

Aplocneminae ([*erratum* Haplocneminae] Crowson, 1964: 316, 317, 318, 319, 320; Constantin, 1965: 92; Vinson, 1967: 330); Majer, 1983: 387. **Syn. n.**

Aplocnemina; Majer, 1987: 800.

### Taxonomy and distinguishing features

**Adults** Adult Rhadalinae are distinguished from the other subfamilies of Melyridae by the following characters in combination:- first two visible abdominal sternites connate; apical segment of maxillary palps broadened, securiform or triangular except in some species of *Aplocnemus* Stephens); median lobe of aedeagus with dorsal appendage (Fig. 7) or 'lever' (Majer, 1982).

Members of the Rhadalinae are diverse in appearance but all have the three characters mentioned above, except for *Aplocnemus* (*Ischnopalpus*) which has a spindle-shaped apical segment to the maxillary palps, and *Indiodasytes* which lacks the dorsal appendage to the median lobe of the aedeagus. They are also characterized by the following features:- antennae usually serrate, sometimes pectinate; eyes entire or weakly emarginate; head generally broader than long, often retractable under pronotum; body usually densely hairy and strongly convex; tarsi varying from finely elongate and simple to short, broad and weakly lobed, segment 1 normally at least as long as 2; tarsal claws toothed or with free membranous appendages; dorsum either unicolorous or patterned; puncturation on head simple, rimmed, or confused; pronotal punctures entirely simple, or simple on disc but rimmed or tuberculate at sides, or all rimmed or all tuberculate, or confused so that individual punctures are not distinguishable; elytral punctures usually simple, sometimes with a seta emerging from the puncture, but more usually from beside it; epipleura well developed at base; wing venation variable as shown in Figs 48–59.

Crowson (1964) erected the subfamily Aplocneminae (as Haplocneminae) [= Rhadalinae] for the following genera: *Anthriboclerus* Schenkling, [*H*] *Aplocnemus* Stephens, *Cymbolus* Gorham, *Diplambe* Schilsky, *Donaldia* Alluaud, *Eucymbolus* Champion, *Ischnopalpus* Schilsky, *Julistus* Kiesenwetter, *Malthacodes* Waterhouse, *Pelecophora* Dejean, *Rhadalus* LeConte, *Trichocele* Thomson and *Xamerpus* Fairmaire. Majer (1983), who regards the group as of lower taxonomic rank than subfamily, added *Furbanus* Majer, *Semijulustus* Schilsky and *Microjulustus* Reitter. In this paper I add: *Antinea* Peyerimhoff, *Celsus* Lewis, *Eurelymis* Casey, *Indiodasytes* Pic and *Hemipleurus* gen. n. A complete checklist of included genera is provided below.

**Larvae.** The known rhadaline larvae (*Trichocele*, *Aplocnemus*, and *Pelecophora*) possess the following characters (Crowson, 1964): head with 2 ocelli on each side, the larger one being anterior to the smaller, so that a line through the 2 would pass through the antennal foramen; urogomphi, on abdominal tergite 9, varying from minute to very long; abdominal tergite 9 either with a membranous appendage in the middle of each side (*Pelecophora* and *Aplocnemus*), or with a group of setiferous tubercles (unnamed larva from Chile) or forming a large flat plate with minute, widely separated urogomphi (*Trichocele*).

Rhadaline and melyrine larvae have glandular openings on the 9th abdominal tergite only (Crowson, 1981) and some *Aplocnemus* larvae have dark subcuticular patches on abdominal segments 1–8, usually 2 pairs on each segment. Vinson gives a detailed description of a larva assumed to be *Pelecophora pikei* Vinson (1957).

Larvae of the other melyrid subfamilies usually have more ocelli, but if there are only two on each side, then they are one above the other so that a line through them would not pass through the antennal foramen. Tergite 9 is without the above mentioned structures.

### Biology

With the exception of Australasia, species of Rhadalinae are known to occur in all major biogeographic regions, but little is known about their biology.

Most adult rhadalines are probably carnivorous to a certain extent. Examination of the gut contents of adult species of *Aplocnemus*, *Trichocele*, *Pelecophora* and *Donaldia* [= *Malthacodes*] has revealed insect



fragments (Vinson, 1946; Crowson, 1964), but in species of *Rhadalus* and *Indiodasytes* only pollen grains were found (Crowson, 1964; Peacock, pers. obs.). Denticulation of the cutting edge of the mandible, a character indicating pollinivorous habits, is absent in most Rhadalinae, although it is shown in a figure of a mandible of *Pelecophora* (Vinson, 1946), indicating perhaps that this genus is both carnivorous and pollinivorous.

It is likely that the larvae of this group are carnivorous as are most cleroid larvae, even though the examination of some larval gut contents by Crowson (1964) revealed no identifiable remains. This view is supported by the presence of a pedunculate seta (Vinson called it a 'lacinia') on the maxillary mala of a larva of *Pelecophora* (Vinson, 1957), a character peculiar to all known carnivorous cleroid larvae (Crowson, 1964).

There appear to be scant records of habitat preference and the few larvae that have been collected seem to live concealed either on or in the soil or in decaying wood. The following paragraphs give an indication of the habitat preferred by some adults.

In Mauritius, *Pelecophora* and *Donaldia* [= *Malthacodes*] have been found during the day on the leaves and branches of shrubs and trees, where they were probably feeding on small insects (Vinson, 1946). Vinson noticed that these seemingly carnivorous beetles are constantly associated with the indigenous vegetation, occurring in their greatest numbers during the hot season from November to March. He also found a *Pelecophora* larva under a stone in association with an adult crawling out of a pupal cell (1957).

Adults of the North American *Eurelymis* [= *Semijulistus*] are often found at high altitudes. They are attracted to wood smoke (Leech, 1931) and have been found on *Achillea* (Hatch, 1961). *E.* [= *S.*] *atra* LeConte has been reared from pupae which were found in bee burrows, in sand, in Alberta, Canada, and *E.* [= *S.*] *flavipes* LeConte was found on *Pyrocantha* in California [specimens loaned to author]. *Cymbolus* [= *Rhadalus*] *elongatus* Champion was collected in Temascaltepec, Mexico, in large numbers on *Mimosa* and *Spondias* spp. and several individuals of *C.* [= *R.*] *wolcotti* Hinton were collected on *Pinus pseudostrobus* Lindley (Hinton, 1934).

In Japan, *Celsus* [= *Semijulistus*] is not common and has only been seen in recent years (Nakane, pers. comm.). In Kogoshima, Nakane found adults in abundance on flowers of *Viburnum*, *Rosa*?, *Prunus*? etc. in April and May, but collected only one in July. They were usually captured singly or in pairs except in mid-April when as many as 45, of both sexes, were seen at a time. No larvae were found.

In Central Europe *Aplocnemus* is found on the flowers of pine trees, but has also been collected on deciduous trees, and *Trichoceble* (widespread but not common) has been found on flowering shrubs and in dry wood under trees (Lohse, 1979). *Aplocnemus* has been recorded on oak in Spain (Constantin, 1965) and *Kubanius elegans* Majer (U.S.S.R.) was 'reared in *Picea schrenckiana*' (Majer, 1983).

### Checklist of the genera of the Rhadalinae

**ANTHRIBOCLERUS** Schenkling, 1922: 328.

**ANTINEA** Peyerimhoff, 1929: 191.

**APLOCNEMUS** Stephens, 1830: 316.

*Elicopis* Stephens, 1829: 136.

*Haplocnemus* Stephens; Agassiz, 1846[7]: 29.

*Helicopis* Stephens; Agassiz, 1846[7]: 29.

Subgenus **APLOCNEMUS** Stephens, 1830: 316.

Subgenus **DIPLAMBE** Schilsky, 1894: 234.

Subgenus **HOLCOPLEURA** Schilsky, 1894: 234.

Subgenus **ISCHNOPALPUS** Schilsky, 1894: 235.

Subgenus **PSEUDAPHYCTUS** Pic, 1896: 47.

**EUCYMBOLUS** Champion, 1913: 129.

**HEMIPLEURUS** gen. n.

**INDIODASYTES** Pic, 1916: 14.

**KUBANIUS** Majer, 1983: 385.

**MALTHACODES** Waterhouse, 1876: 116,

*Xamerpus* Fairmaire, 1886: 41. **Syn. n.**

*Donaldia* Alluaud, 1898: 102.

**MICROJULISTUS** Reitter, 1889a: 111.

*Ceralliscus* Bourgeois, 1894: 121.

**PELECOPHORA** Dejean, 1821: 115.

*Diglobicerus* Latreille, 1829: 475.

**RHADALUS** LeConte, 1852: 212.

*Cymbolus* Gorham, 1886: 324. **Syn. n.**



**SEMIJULISTUS** Schilsky, 1894: 227.

*Celsus* Lewis, 1895: 118. **Syn. n.**

*Eurelymis* Casey, 1895: 600. **Syn. n.**

**TRICHOCEBLE** Thomson, 1859: 109.

*Julistus* Kiesenwetter, 1859: 175.

### Notes on the key and checklists of species

The measurements of approximate body length in the descriptions are taken from the front of the pronotum to the apex of the elytra, since in many genera the head is retractable under the pronotum and hence only partially visible from above.

The term 'free' when describing the membranous appendages on the claws means that they are attached to the claws at the base only (Fig. 15). In most dasytines possessing these structures, the appendage is attached to the claw along its length almost to the apex, or for at least half its length (Blaisdell, 1938: pl. 2, figs 1–20).

A 'rimmed' puncture means that there is a circle around the puncture but the area within this is not raised above the surrounding surface (Fig. 1). A 'tuberculate' puncture is within a circular area which is raised above the surrounding surface (Figs 21, 22, 24).

In the species checklists it should be noted that the species of earlier authors are taken from the *Coleopterorum Catalogus* (Pic, 1926, 1929, 1937) in order to complete the lists and have not in all cases been examined. However, the references have been checked and many errors have been rectified. The varieties cited in Pic's catalogue have been listed here in synonymy. The generic names in parentheses denote the genus in which the species was described, if not the current genus.

### Abbreviations

BMNH British Museum (Natural History), London.

MCZ Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts.

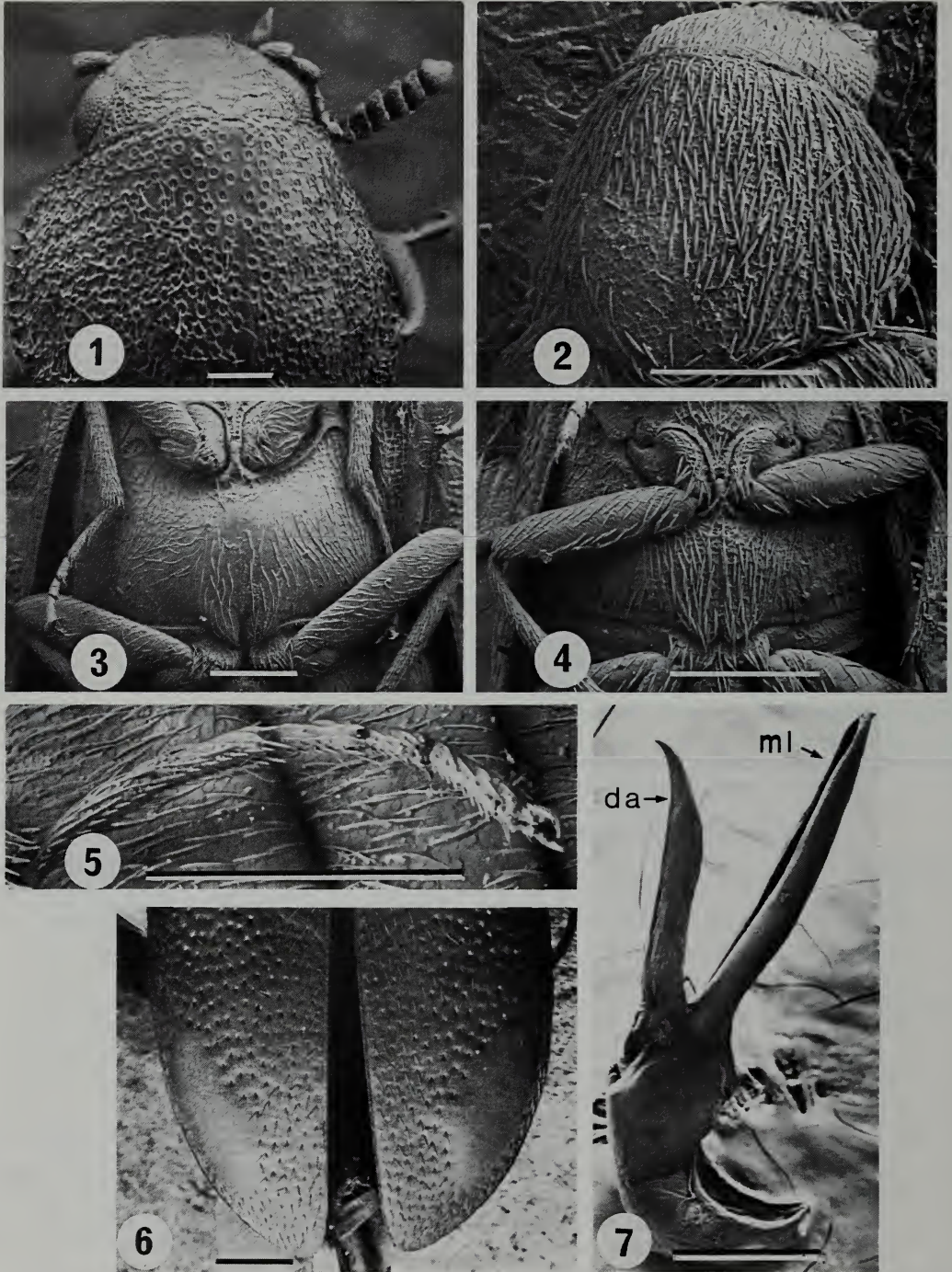
MNHM Muséum national d'Histoire naturelle, Paris.

USNM National Museum of Natural History [U.S. National Museum], Smithsonian Institution, Washington, D.C.

[*Note.* See *Acknowledgements* for full list of institutions from which material was borrowed.]

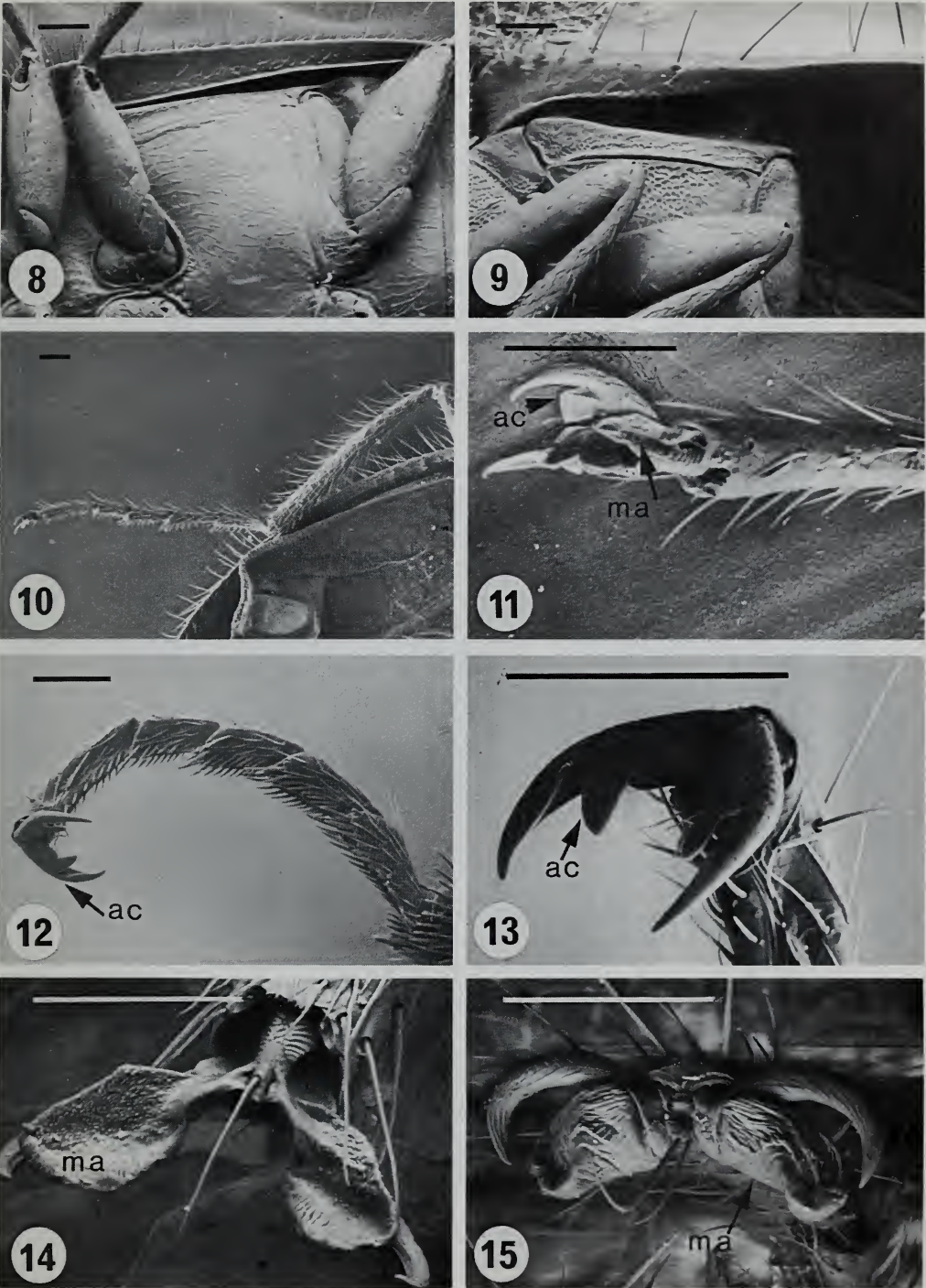
### Key to adults of the world genera of the Rhadalinae

- 1 Epipleura very narrow, usually mat or granular, and deflecting laterad at, or before, level of hind coxae (Figs 3, 4), becoming subvertical. Pubescence of dorsum uniformly short and recumbent, sometimes scale-like (Figs 1, 2). Tarsi elongate and slender (Figs 3, 5), claws with small teeth, without membranous appendages. Antennae fairly short, sometimes with segments 7–10 enlarged, compactly serrate (Fig. 1). Length not more than 5 mm. .... 2
- Epipleura broader, usually shiny, deflecting dorsad either at about level of 2nd or 3rd visible abdominal sternite (Figs 8, 17, 35) or at or before base of 1st visible abdominal sternite (Fig. 9). Pubescence of dorsum not as above, nearly always with some erect or semi-erect setae. Tarsi variable. Antennae elongate, reaching base of pronotum or beyond and usually loosely serrate or pectinate from segments 4–10 (rarely 3–10) (Figs 40–44). Length 2–7 mm. .... 3
- 2 Epipleura evanescent anterior to 1st abdominal sternite (Fig. 4). Lateral pronotal margin smooth, or with a few small teeth near base. Pronotum mat, puncturation indistinct, with strong microsculpture, forming an irregular reticulum under pubescence (Fig. 2). Disc of metasternum flat, with distinct median longitudinal groove (Fig. 4). Females without unpunctured patch on apical third of elytron. Length less than 3 mm. (C. Europe & Asia, Africa, Arabia, Mediterranean). ..... **MICROJULISTUS**(p. 161)
- Epipleura narrow and becoming subvertical from level of 1st abdominal sternite, visible in side view from just behind shoulder. Lateral pronotal margin strongly serrate. Pronotum with shallow, rimmed punctures (Fig. 1), sometimes obscured by pubescence. Disc of metasternum convex, without a distinct median longitudinal groove (Fig. 3). Females usually with shiny unpunctured patch on apical third of each elytron (Fig. 6). Length 3–5 mm. (C. & E. Europe, Asia, Japan, western U.S.A., Canada). ..... **SEMIJULISTUS**(p. 159)
- 3 Tarsi elongate and claws appendiculate, membranous appendages either absent or minute. (Figs 10–13). .... 4



**Figs 1-7** 1, 6, 7, *Semijulistus ater* (Canada): (1) pronotum; (6) elytral apices of female; (7) aedeagus of male. 2, 4, *Microjulistus fulvus* (U.S.S.R., Kazakhstan): (2) pronotum; (4) metasternum. 3, 5, *Semijulistus spectabilis* (Japan): (3) metasternum; (5) hind tarsus. (Scale line = 0.3 mm.) *da* = dorsal appendage; *ml* = median lobe.)

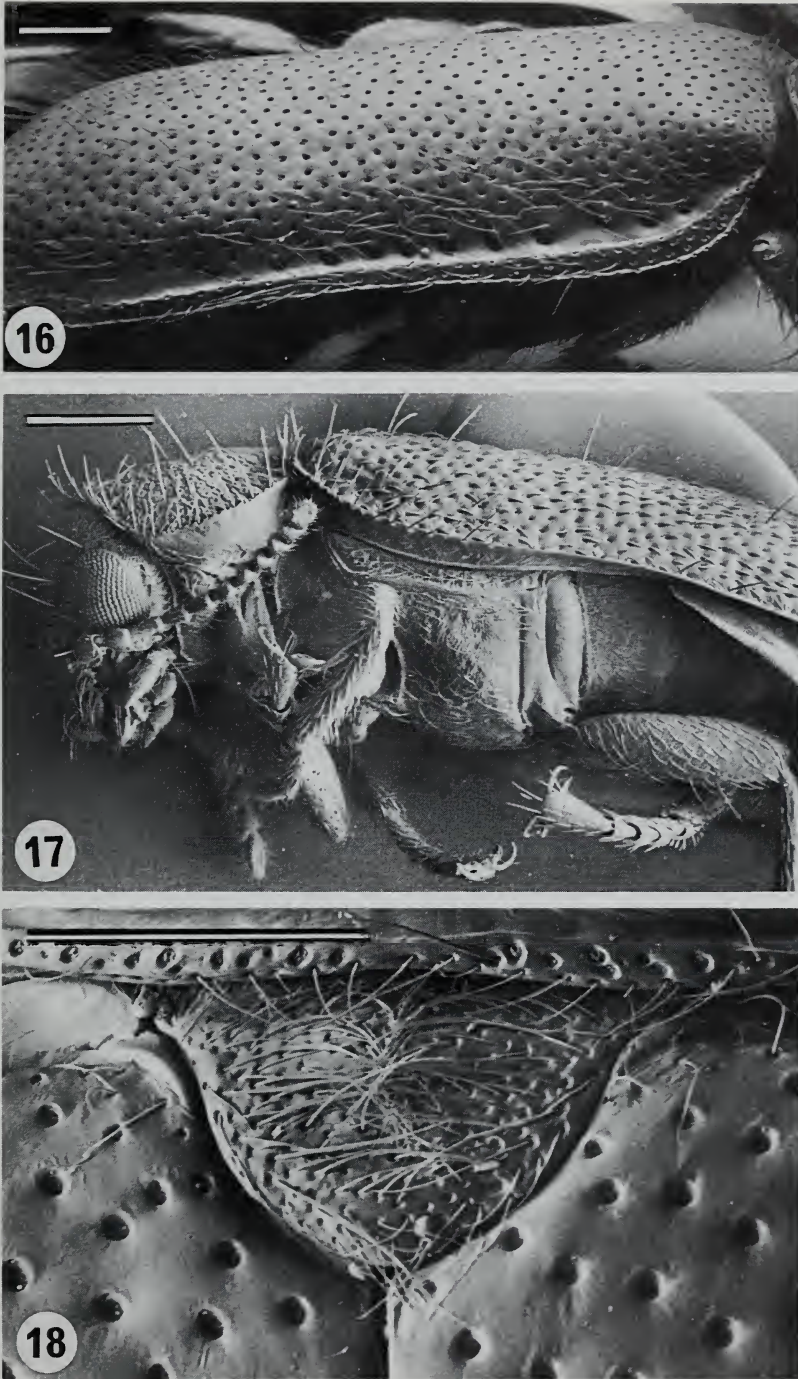




Figs 8–15 8, *Malthacodes pictus* (Rodríguez I.): epipleuron. 9, *Hemipleurus floriger* (Sarawak [paratype]): epipleuron. 10, 11, *Kubanius elegans* (U.S.S.R., Kazakhstan [paratype]): (10) hind tarsus; (11) hind claw. 12, 13, *Trichoceble floralis* (France): (12) hind tarsus; (13) claw. 14, *Aplocnemus impressus* (England): hind claw. 15, *Pelecophora illigeri*, (Mauritius): hind claw. (Scale line = 0.1 mm.) *ma* = membranous appendage; *ac* = appendiculate claw.

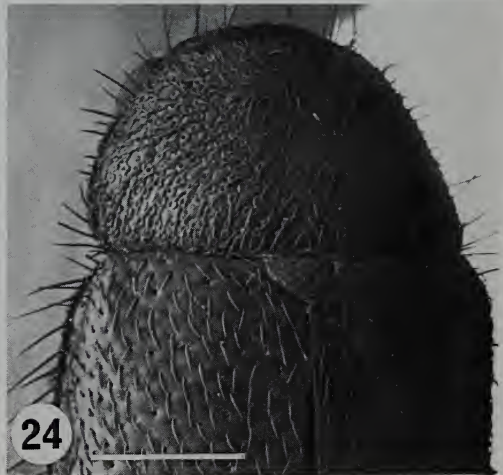
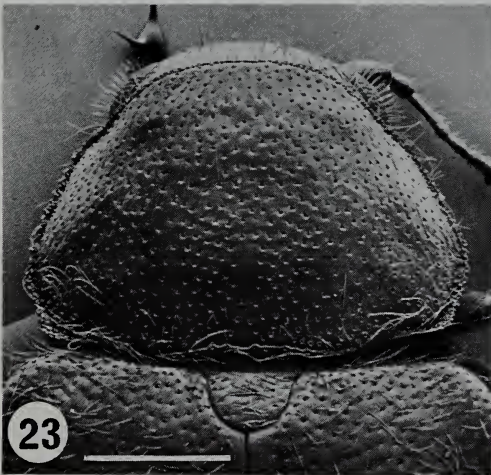
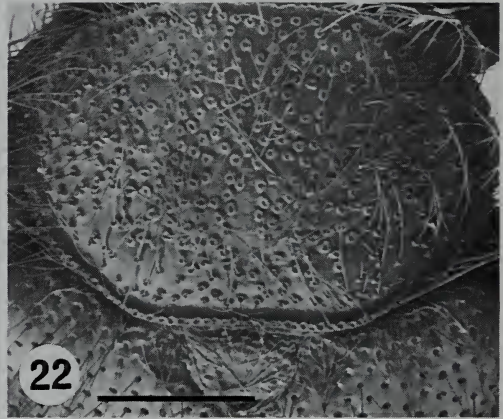
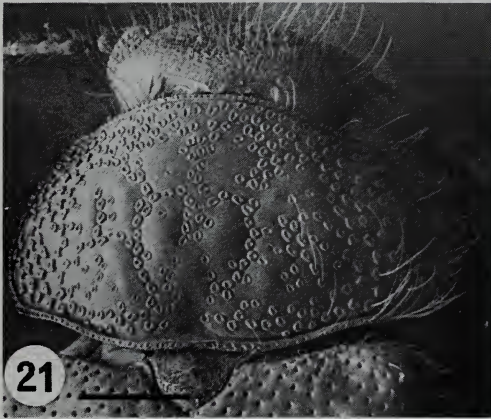
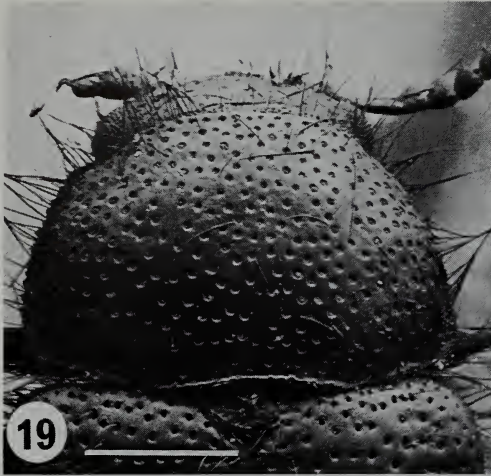


- Tarsi stout or delicate, claws not appendiculate, but with large free membranous appendages (Figs 14, 15, 45-47). ..... 6
- 4 Eyes small, oval, not projecting beyond contour of head. Head weakly convex between eyes. Temples long, subparallel. Claws with minute teeth. Apterous, without humeral swellings. (N. Africa: Sahara.) ..... **ANTINEA** (p. 159)
- Eyes large, reniform, prominent, projecting beyond contour of head when seen from above. Head sometimes with a short, longitudinal groove or depression at inner side of antenna and eye. Temples constricted behind eyes. Claws with strong teeth. Winged, elytra with distinct humeral swellings. .... 5
- 5 Dorsum without metallic sheen. Hard-bodied. Pronotum usually elliptical, broader than head (including eyes). Elytra and pronotum convex and densely punctured; epipleura long, extending to about 2nd visible abdominal sternite. Hind tarsus not quite as long as tibia. Claws with either pointed (Figs 12, 13) or blunt teeth. (C., S. & E. Europe, Asia, China.)  
**TRICHOCEBLE** (p. 158)
- Dorsum with slight metallic sheen. Soft-bodied, malacodermiform. Pronotum subquadrate or elliptical, sometimes flattened on disc, not always broader than head. Elytra flattened on disc, apices abruptly declivous, rather sparsely punctured; epipleura short, not reaching hind coxae. Hind tarsus about as long as tibia (Fig. 10). Claws with large, blunt teeth, sometimes also with small, obscure membranous appendages (Fig. 11). (U.S.S.R. (Kazakhstan), N. India.) ..... **KUBANIUS** (p. 157)
- 6 Elytra with sublateral carina in basal half, forming a double elytral edge (Fig. 16). ..... 7
- Elytra without sublateral carina in basal half (Fig. 17). ..... 9
- 7 Pronotal punctures all simple. Apical segment of maxillary palps only weakly securiform (Fig. 31). Form elongate, elytra more than twice as long as wide. Dorsum usually black, sometimes with a metallic sheen. (Greece.) ..... **APLOCNEMUS (DIPLAMBE)** (p. 151)
- Pronotal punctures tuberculate, at least near sides. Apical segment of maxillary palps triangular. Form elongate and dorsum usually unicolorous brown, or form very broad (length less than twice width), head brown, elytra and pronotum black. .... 8
- 8 Form elongate. Elytra and pronotum brown. Scutellum mat, densely and finely punctate and densely setose (Fig. 18). Sublateral elytral carina close and subparallel to costal margin, forming an abrupt, narrow, horizontal shelf, with a row of very large punctures along inner side (Fig. 16). Disc of pronotum with strongly rimmed or tuberculate punctures, sometimes with raised, shiny puncture-free patches (Figs 21, 22). (Southern U.S.A., C. & S. America.)  
**RHADALUS** (p. 144)
- Form very short and broad (see couplet 7). Elytra and pronotum bluish-black. Scutellum shiny, very sparsely punctate and setose. Sublateral carina oblique to costal margin and less prominent, so scarcely forming a shelf, without such large punctures along inner side. Pronotum with small simple punctures on disc and tuberculate punctures near sides. (C. America.) ..... **EUCYMBOLUS** (p. 145)
- 9 Humeral swellings very prominent and elytra with a pronounced transverse depression across basal third (Figs 29, 30). ..... 10
- Humeral swellings less prominent and elytra without a transverse depression across basal third. .... 11
- 10 Pronotum very large and quadrate, about half as long as elytra; shiny, with sparse setae, puncturation inconspicuous (Fig. 27). Head large, shiny and convex with faint diagonal ridges from base of antenna to eye (Fig. 25). Elytra with semi-erect shorter setae between the sparse, very long, erect setae; tufts of dense setae present on weak tubercles, just posterior to transverse elytral depression, and also on larger tubercles at inner side of humeral swellings (Fig. 29); epipleura extending to base of 2nd visible abdominal sternite. (Seychelles.)  
**ANTHRIBOCLERUS** (p. 145)
- Pronotum of moderate size, transverse, much less than half as long as elytra; with distinct puncturation (Fig. 28). Head mat, without diagonal ridges (Fig. 26). Elytra with recumbent setae between sparse, long, erect setae (Fig. 30); epipleura not extending further than base of 1st visible abdominal sternite (Fig. 9). (Borneo.) ..... **HEMIPLEURUS** (p. 147)
- 11 Pronotal punctures simple (Fig. 19). Maxillary palps moderately securiform (Fig. 31) or spindle-shaped (Fig. 32). Dorsum usually brown or black, often with a metallic bluish or greenish tinge (some species from the Canary Is are light brown or yellow). Setae on elytra usually of fairly uniform length and colour. (Palearctic, N. & W. Africa (Angola? & Ivory Coast), Asia Minor, Philippines.) ..... **APLOCNEMUS** (p. 151)



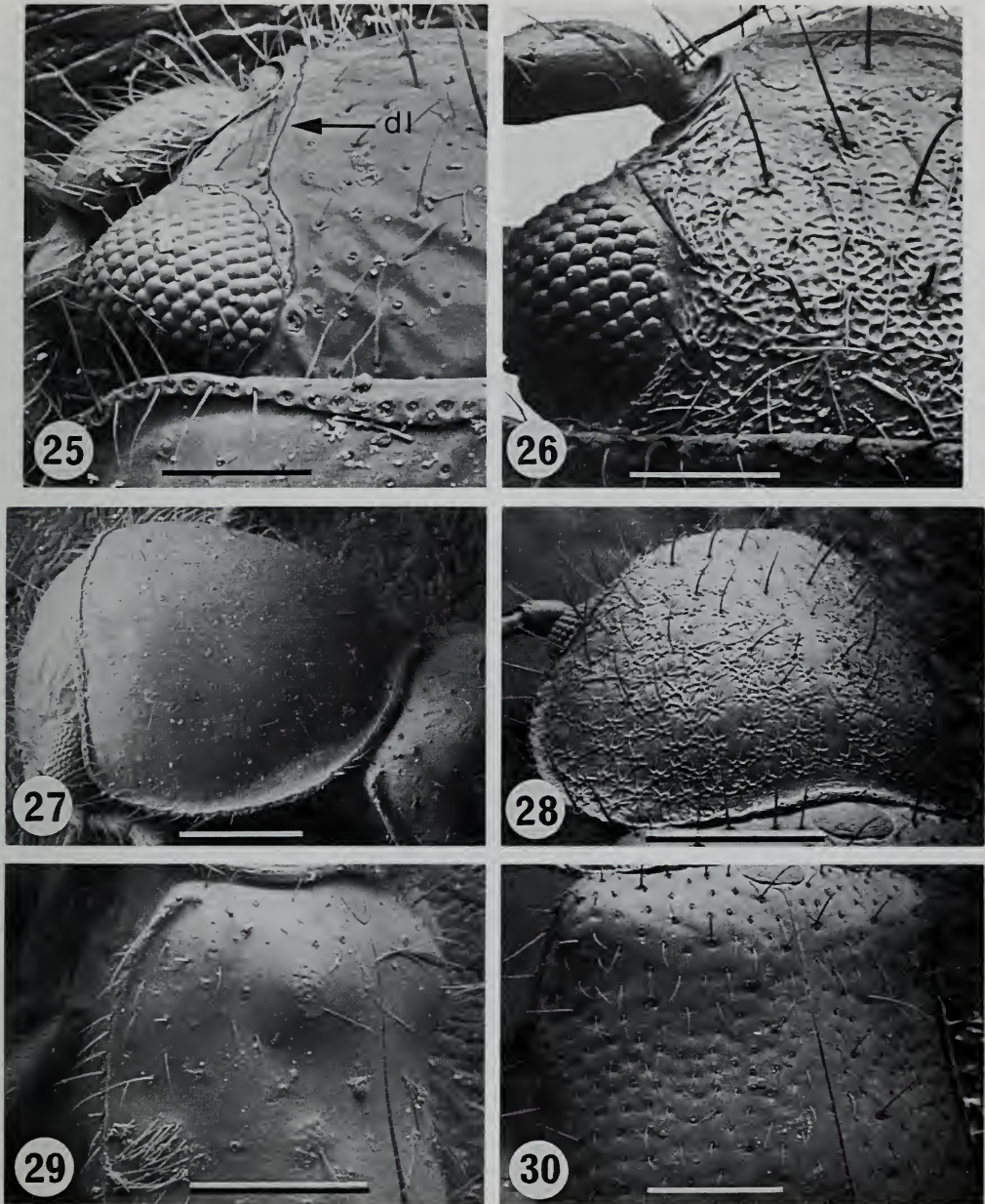
**Figs 16–18** 16, *Rhadalus rufopiceus* (Guatemala [syntype]): lateral view of elytron. 17, *Indiodasytes madurensis* (India [holotype]): lateral view of body. 18, *Rhadalus rufopiceus*: scutellum. (Scale line = 0.4 mm.)



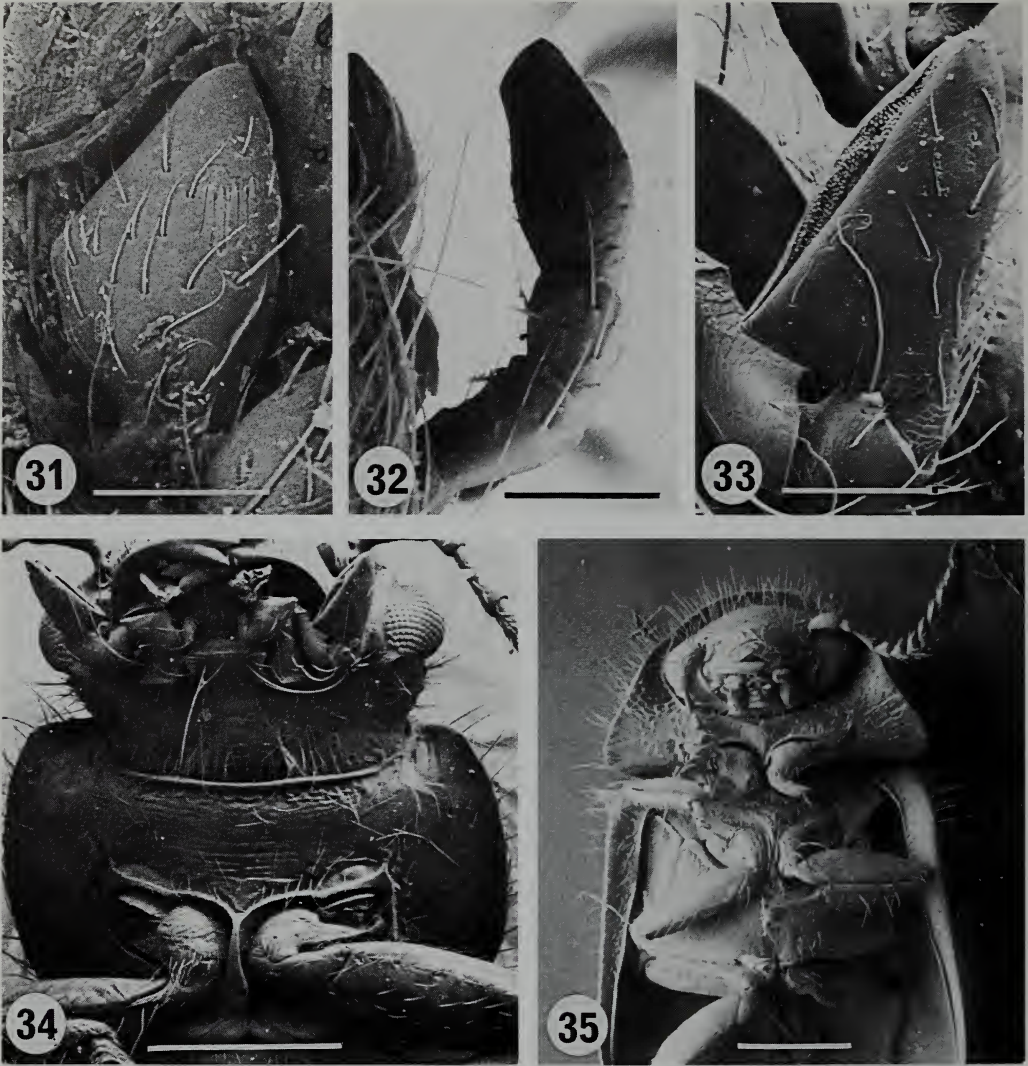


Figs 19–24 Pronotum of: (19) *Aplocnemus impressus* (England); (20) *Pelecophora illigeri* (Mauritius); (21) *Rhadalus rufopiceus* (Guatemala [syntype]); (22) *Rhadalus testaceus* (U.S.A.); (23) *Trichoceble floralis* (France); (24) *Indiodasytes madurensis* (India [holotype]). (Scale line = 0.5 mm.)





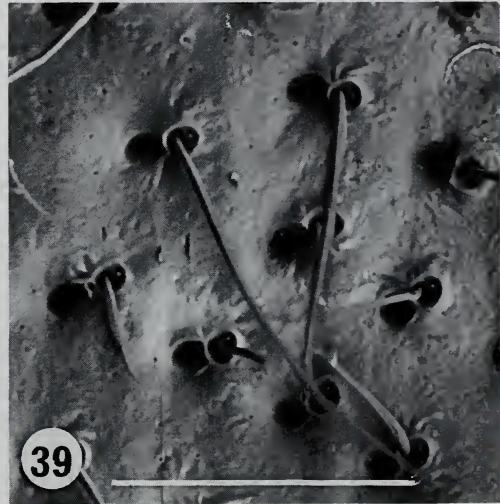
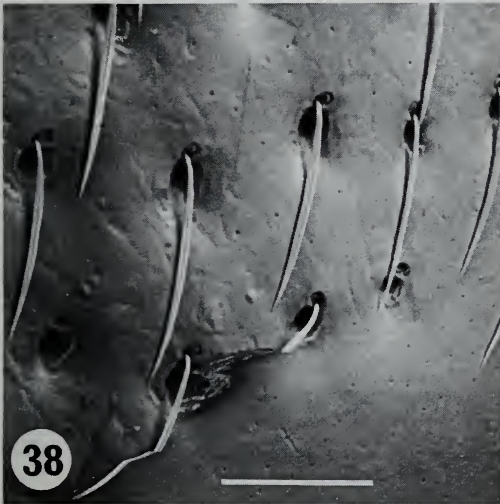
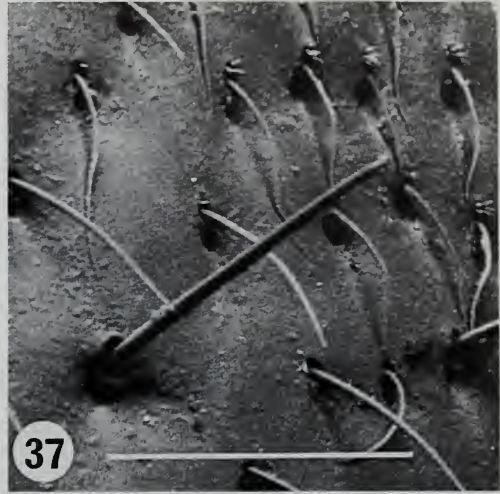
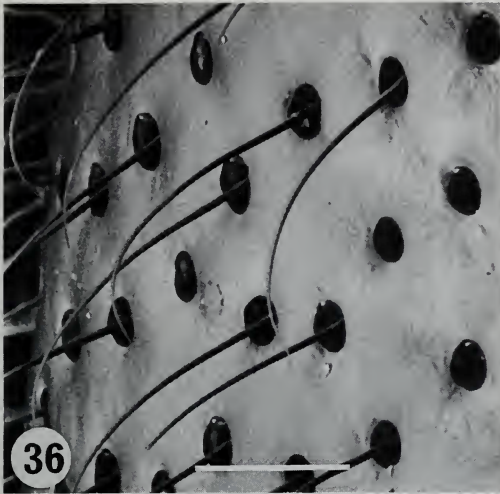
**Figs 25–30** 25, 27, 29, *Anthriboclerus scotti* (Seychelles [paratype]); (25) part of head; (27) pronotum; (29) basal half of elytra. 26, 28, 30, ditto, *Hemipleurus floriger* (Sarawak [paratype]). (Scale line = 0.1 mm in Figs 25, 26; = 0.3 mm in Figs 27–30.) *dl* = diagonal line.



**Figs 31–35** 31–33, apical segment of maxillary palp of: (31) *Aplocnemus nigricornis* (England); (32) *Aplocnemus (Ischnopalpus) sanctus* (Palestine); (33) *Pelecophora illigeri* (Mauritius). 34, 35, ventral view of prosternum of: (34) *Pelecophora illigeri*; (35) *Malthacodes vageguttatus* (Madagascar). (Scale line = 0.1 mm in Figs 31–33; = 0.5 mm in Figs 34–35.)

- Pronotal punctures tuberculate or rimmed at sides. Maxillary palps broadly triangular (Fig. 33). Dorsum brown or black or bicolorous and patterned. Elytral setae not usually uniform, sometimes both erect and semi-erect, or with patches of recumbent setae, often bicolorous. 12
  - 12 Head very large, not retractable under pronotum. Prosternum long in front of coxae; prosternal process well developed (Fig. 34). Pronotal punctures usually simple on disc and tuberculate at sides, sometimes becoming weakly tuberculate on disc also, which then appears rugose (Fig. 20). Elytra usually with short and long, erect or suberect setae, often forming patches. Cuticle or setae bicolorous. (Mauritius, Réunion, E. Africa.)
- PELECOPHORA** (p. 146)
- Head smaller, somewhat vertical, partly retractable under pronotum. Prosternum shorter in front of coxae; prosternal process small and pointed (Fig. 35). Pronotal punctures rimmed or tuberculate on disc, or not clearly defined, but never simple. Cuticle either bi- or unicolorous; setae variable in length, type and colour. 13

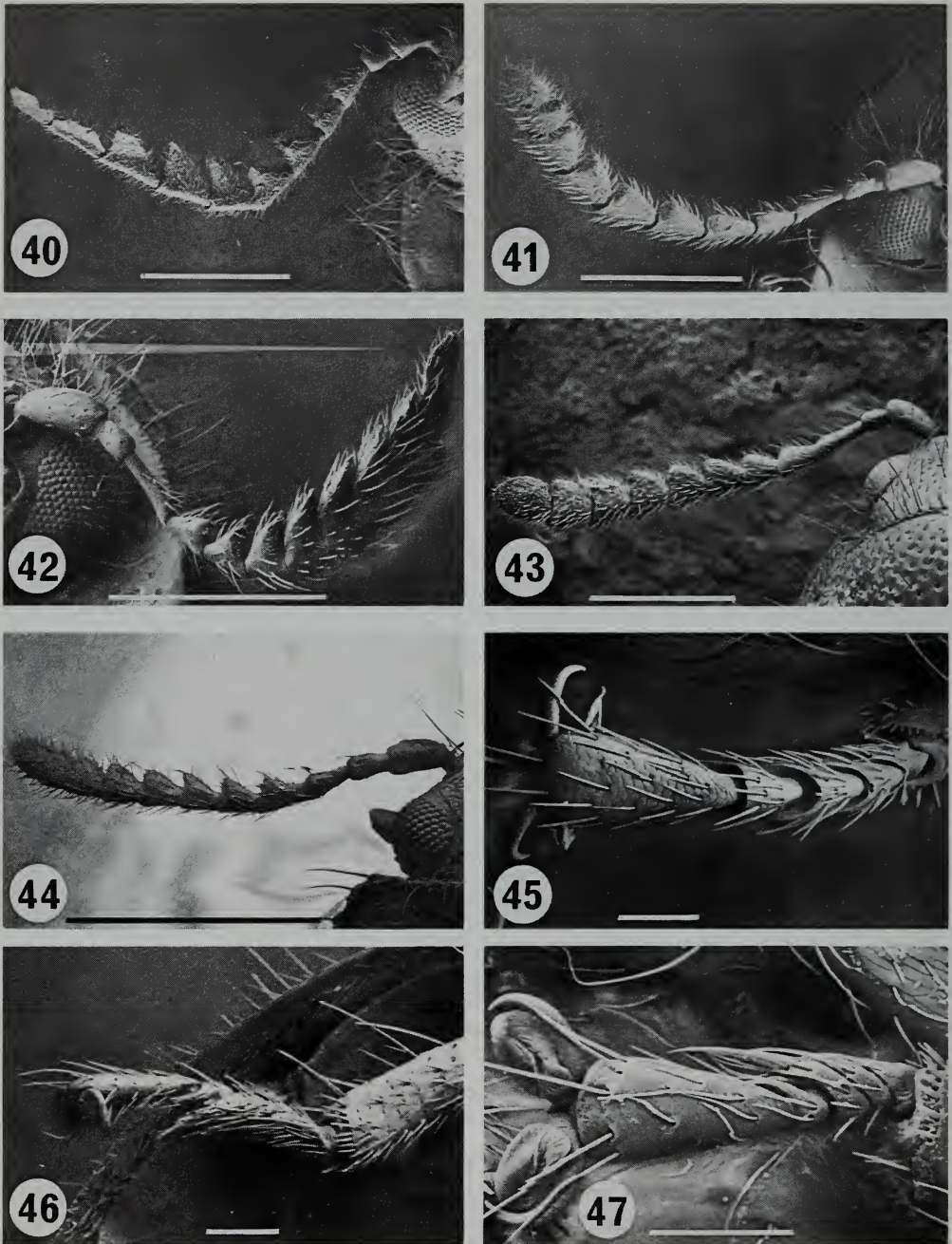




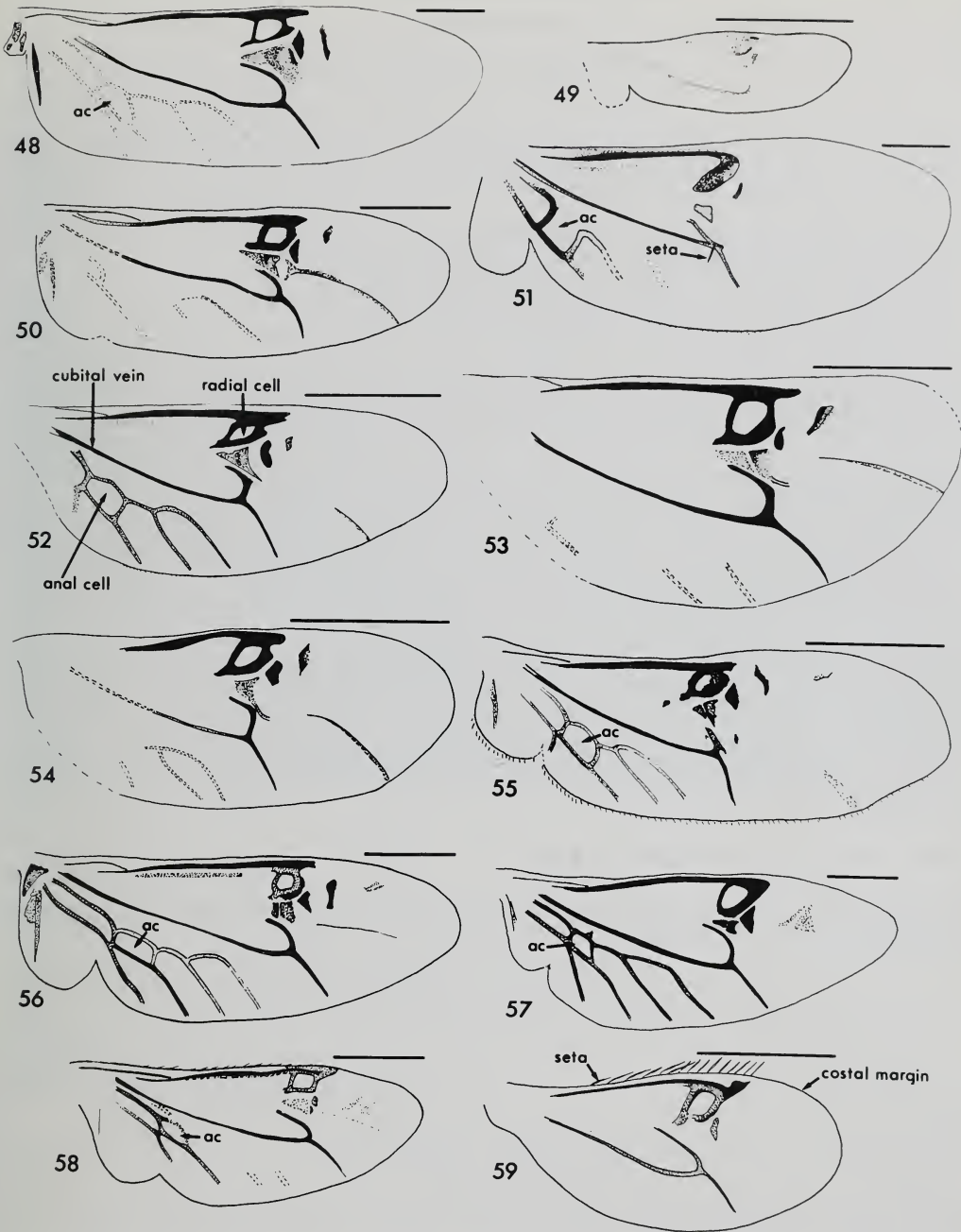
Figs 36–39 Elytral puncturation of: (36) *Rhadalus rufopiceus* (Guatemala); (37) *Hemipleurus floriger* (Sarawak); (38) *Semijulistus ater* (Canada); (39) *Trichoceble floralis* (France). (Scale line = 0.1 mm.)

- 13 Tarsi stout, hind ones longer than half a tibia, dark brown, without very long ventral setae, segments 1–4 subequal, penultimate segment apically truncate dorsally (Fig. 45). Form elongate. Dark brown and/or black. .... 14
- Tarsi delicate, hind ones usually about half tibial length or less, usually pale coloured, segments 1–3 subequal sometimes with very long ventral setae, segment 4 smaller, dorsally apically emarginate (Fig. 46). Form either broad and short or elongate. Unicolorous or bicolourous, often patterned. (Madagascar, Seychelles, Aldabra, Mauritius, Réunion, Rodriguez I., Africa, India, Sri Lanka.) ..... *MALTHACODES* [in part] (p. 149)
- 14 Head and pronotum black, elytra dark brown. Pronotum very strongly punctured and with a distinct longitudinal unpunctured area (sometimes raised) in mid line near base. Dorsal pubescence recumbent or semi-erect, usually with a few erect setae laterally (Fig. 24). Wings with strong venation, anal cell either present or obsolete. Aedeagus without dorsal appendage. (India, Sri Lanka.) ..... *INDIODASYTES* (p. 151)
- Dorsum entirely dark brown or black. Pronotum less strongly punctured and without longitudinal unpunctured area near base. Dorsal pubescence not recumbent. Wings with weak venation, anal cell lacking. Aedeagus with dorsal appendage. (India.)  
*MALTHACODES* [in part] (p. 149)





**Figs 40–47** 40–44, antenna of: (40) *Kubanius elegans* (U.S.S.R.: Kazakhstan [paratype]); (41) *Malthacodes pictus* (Rodriguez I.); (42) *Malthacodes vageguttatus* (Madagascar); (43) *Pelecophora illigeri* (Mauritius); (44) *Hemipleurus floriger* (Sarawak [paratype]). 45–47, tarsus of: (45) *Indiodasytes madurensis* (India [holotype]) (hind); (46) *Malthacodes vageguttatus* (hind); (47) *Hemipleurus floriger* (front). (Scale line = 0.5 mm in Figs 40–44; = 0.1 mm in Figs 45–47.)



Figs 48–59 Hind wing of: (48) *Rhadalus elongatus* (Mexico); (49) *Antriboclerus scotti* (Seychelles [paratype]); (50) *Pelecophora illigeri* (Mauritius); (51) *Hemipleurus floriger* (Sarawak [paratype]); (52) *Malthacodes pictus* (Rodriguez I.); (53) *Malthacodes vageguttatus* (Madagascar); (54) *Malthacodes elegans* (Mauritius); (55) *Indiodasytes* sp. (undescribed sp. from Sri Lanka); (56) *Aplocnemus nigricornis* (France); (57) *Trichoceble floralis* (France); (58) *Semijulistus flavipes* (U.S.A., California); (59) *Microjulustus subconvexus* (South Africa). (Scale line = 1.0 mm.) ac = anal cell.



## Generic diagnoses

### *RHADALUS* LeConte

(Figs 16, 18, 21, 22, 36, 48)

*Rhadalus* LeConte, 1852: 212. Type species: *Rhadalus testaceus* LeConte, 1852: 212, by monotypy.

*Cymbolus* Gorham, 1886: 324. Type species: *Cymbolus rufopiceus* Gorham, 1886: 324, by subsequent designation (Blaisdell, 1938: 9). **Syn. n.**

Elongate, convex, light or dark brown, occasionally darker ventrally or legs, palps and antennae lighter. Dorsum and legs covered with long erect, semi-erect or strongly curved golden setae.

*Head* subvertical, usually with a longitudinal groove or ridge at each side of frons, near inner side of eye; puncturation sparse, simple, rimmed or weakly tuberculate, surface shiny or microreticulate between punctures. Eyes large or small, varying in shape from entire to strongly emarginate, with short setae; facets very large and convex. Antennae long, extending well beyond base of pronotum, length from less than two-fifths of body length to more than half; serrate from 4th segment. Apical segment of maxillary palps triangular. *Pronotum* weakly to strongly transverse (Figs 21, 22); lateral margins explanate, curved and weakly crenulate; base strongly sinuate, bordered; all angles more or less rounded; either evenly elliptical or with anterior angles weakly produced anteriorly; disc sometimes with raised shiny patches between punctures; punctures usually rimmed or tuberculate on disc, rarely simple, sometimes tuberculate near sides; anterior margin of pronotum strongly anterior to that of prosternum, allowing head to fit in vertically. *Scutellum* broadly triangular, with rounded apex, mat (owing to dense puncturation), densely setose, cuticle obscured (Fig. 18). *Elytral* sides parallel or weakly diverging posteriorly, crenulate, with a carina running subparallel to lateral edge, becoming obsolete well before apex; above carina a narrow horizontal shelf with row of very large punctures in a concavity (Fig. 16); elsewhere with smaller, dense punctures, from which elytral setae emerge (Fig. 36); epipleura quite broad, transversely concave, with well-defined smooth inner edge, deflecting dorsad and becoming obsolete at about level of 3rd to 5th visible abdominal sternite. *Hind wing* as in Fig. 48. *Tarsi* moderately elongate with segments 1–4 weakly lobed and densely ventrally setose, segment 4 marginally smaller than 3; apical segment almost as long as the others together and much broader at apex. Claws with large, free, membranous appendages. Anterior tibiae with a few short, rather obscure external spines among long erect and semi-erect setae. *Prosternal process* on higher plane than front coxae, very narrow, just reaching their hind margin. *Length* 3.8–7.0 mm (width 1.7–3.0 mm).

**DISTRIBUTION.** Guatemala, Mexico, Brazil, southern U.S.A. (Arizona).

#### MATERIAL EXAMINED

8 species, including syntypes of type species of *Cymbolus* (BMNH) and holotype of type species of *Rhadalus* (MCZ).

**REMARKS** This genus is recognized by its colour, sublateral elytral carina, strongly setose scutellum, the form of the tarsi, the rimmed or tuberculate pronotal punctures and the raised puncture-free pronotal patches which are present on the disc of most species. It is also recognized by the fact that the elytral setae emerge from the large punctures (Fig. 36) instead of from a smaller adjacent puncture (Figs 37–39) as is usual in the Rhadalinae. This character only occurs in *Eucymbolus* and *Rhadalus* except for *Anthriboclerus* and *Hemipleurus* which have some sparse, erect elytral setae emerging from tuberculate punctures.

The type of *Rhadalus testaceus* LeConte differs from the species assigned to *Cymbolus* in its narrower, elliptical pronotum, without trace of angles, it denser, tuberculate pronotal punctures (without raised shiny, impunctate patches), the longer antennae with more elongate apical segments and its more elongate, less setose, tarsi. The epipleura are of a more even width throughout their length; in *Cymbolus* they are much broader at the base than at the level of the hind coxae. These characters are probably only of specific significance.

Crowson (1964) associated *Rhadalus* LeConte with the other genera of his Aplocneminae on the basis of a female specimen from California. The genus was originally placed in the family Melyridae, tribe Rhadalini, by LeConte, and was later raised to family rank by Pic (1926), together with the genus *Dasyrhadus* Fall. The latter genus is a dasytine, according to Crowson (1964), and certainly the example of *Dasyrhadus longior* Fall in the BMNH does not belong to the Rhadalinae. Both Hatch (1962) and Blackwelder (1975) place *Dasyrhadus* in the Rhadalinae, which they treat as a subfamily of the Melyridae.

Crowson also transferred *Cymbolus* [= *Rhadalus*] *rufopiceus* Gorham to the Rhadalinae from the Melyrinae.

*Rhadalus* is closely related to *Eucymbolus* (p. 145).



**Checklist of species**

- castaneus* (Gorham), 1886: 324 (from *Cymbolus*). Mexico. **Comb. n.**  
*elongatus* (Champion), 1913: 128 (from *Cymbolus*). Mexico. **Comb. n.**  
*lecontei* Casey, 1895: 605. U.S.A.  
*punctipennis* (Gorham), 1886: 325 (from *Cymbolus*). Guatemala. **Comb. n.**  
*quadrituberculatus* (Champion), 1913: 129 (from *Cymbolus*). Brazil. **Comb. n.**  
*rufopiceus* (Gorham), 1886: 324 (from *Cymbolus*). Guatemala. **Comb. n.**  
*testaceus* LeConte, 1852: 212. U.S.A.  
*wolcottii* (Hinton), 1934: 21 (from *Cymbolus*). Mexico. **Comb. n.**

***EUCYMBOLUS* Champion**

*Eucymbolus* Champion, 1913: 129. Type species: *Eucymbolus cyaneus* Champion, 1913: 130, by original designation.

Broadly oval, elytra almost as broad as long, shiny. Body-length less than twice width. Pronotum, elytra and 1st visible abdominal sternites metallic blue-black, remainder reddish brown. Dorsum with erect or semi-erect long golden setae.

*Head* subvertical, frons without grooves or ridges, shiny, with sparse simple punctures. Eyes with sparse, short setae, strongly emarginate. Antennae not very long, scarcely reaching shoulder, serrate from 4th segment, segments about as long as broad except for apical which is elongate. Apical segment of maxillary palps hatchet-shaped, with curved sides. *Pronotum* subelliptical, strongly transverse, more than twice as broad as long; sides explanate and weakly crenulate, anterior edge straight, not bordered in middle, posterior edge evenly curved, strongly bordered, all angles rounded; punctures fine and simple on disc, tuberculate at sides. *Scutellum* broadly subtriangular, shiny, sparsely punctured and setose. *Elytral* sides smooth, not explanate, with a carina running from just beneath humeral swelling to about one-third of elytral length from apex, not parallel with edge, furthest from it beneath shoulder, scarcely prominent, so not forming a shelf; punctures near carina large; elytra strongly punctured, with setae emerging from centres of punctures; epipleura similar to *Rhadalus* but rather broader near base. *Tarsi* similar to *Rhadalus*, segments 1–4 weakly lobed. Anterior tibiae with short, but distinct, external spines. *Prosternal process* and *prosternum* similar to that of *Rhadalus*. *Length* 4.3 mm (width at broadest part 2.7 mm).

DISTRIBUTION. Guatemala.

## MATERIAL EXAMINED

Holotype (unique) (BMNH).

REMARKS. The single specimen known of this genus is possibly merely an aberrant *Rhadalus*, from which it differs in its colour, its less elongate form, the shiny sparsely punctured scutellum, the puncturation of the pronotal disc and the oblique sublateral carina on the elytra.

*Eucymbolus* was transferred from the Melyrinae to the Rhadalinae by Crowson (1964).

**Checklist of species**

- cyaneus* Champion, 1913: 130. Guatemala.

***ANTHRIBOCLERUS* Schenkling**

(Figs 25, 27, 29, 49)

*Anthriboclerus* Schenkling, 1922: 328. Type species: *Anthriboclerus scotti* Schenkling, 1922: 328, by original designation.

Superficially clerid-like. Cuticle unicolorous brown or with indistinct lighter patches on elytral depression and lateral pronotal margin. Dorsum shiny, with dark brown, sparse, semi-erect setae interspersed with sparse, longer, erect setae. On the elytra these erect setae emerge from the centres of large, weakly tuberculate punctures. Elytral tubercles densely setose. Apical antennal segments darker than rest. Tarsi yellowish brown.

*Head* very large and broad, convex and shiny with a faint diagonal ridge on each side of frons from base of antenna to eye; sparsely and minutely punctured (Fig. 25). Eyes very prominent, setose, weakly emarginate. Antennae serrate from 4th segment, very long but segments 4–10 not elongate. Maxillary palps with apical segment broadly triangular. *Pronotum* very large and long, about half elytral length, very

strongly convex, shiny, outline from above quadrate, sides markedly explanate, smooth, subparallel; with strong posterior border; all angles rounded; punctures minute, simple, very sparse (Fig. 27). *Scutellum* smooth, shiny, unpunctured, shield-shaped. *Elytra* (Fig. 29) with very prominent humeral swellings and an even more prominent setose tubercle (with black setae) on each, near base midway between suture and humeral swelling; posterior to these tubercles is a transverse depression and just posterior to this 4 setose patches (with very dense white setae) (2 on each elytron); sides smooth; cuticle smooth, shiny, with very sparse punctures of two distinct sizes, the larger ones weakly tuberculate or rimmed, with an erect seta emerging from the centre of each; epipleura visible from side near base, with smooth inner edge deflecting dorsad at about level of 2nd visible abdominal sternite. *Hind wing* as in Fig. 49. *Tarsi* 4-segmented, segments 1–3 lobed, segment 1 very long, about as long as 4, and longer than 2 and 3 together, segment 3 slightly smaller than 2; segments 1 and 2 with long ventral setae; claws with large free membranous appendages. *Prosternal process* obsolete; anterior edge of prosternum emarginate to receive head, which is subvertical; prosternum long in front of coxae. *Length* about 2·3 mm.

DISTRIBUTION. Seychelles.

#### MATERIAL EXAMINED

Holotype and 2 paratypes (BMNH).

REMARKS. *Anthriboclerus* differs from all other genera in the subfamily by its 4, 4, 4 tarsal formula. It is allied to *Pelecophora* from which it differs mainly in its general appearance, its prominent humeral swellings, transverse depression and setose tubercles on the elytra, its sparse dorsal puncturation and pubescence, the type of puncturation on the pronotum and elytra, the lack of a prosternal process and the ability to fold the head down on to the prosternum.

Although *Anthriboclerus* was originally described in the Cleridae and was later listed under the Corynetinae (Cleridae) in Corporaal's revised catalogue (1950), Crowson (1964) transferred it to the Rhadalinae.

#### Checklist of species

*scotti* Schenkling, 1922: 328. Seychelles.

### **PELECOPHORA** Dejean

(Figs 15, 20, 33, 34, 43, 50)

*Pelecophora* Dejean, 1821: 115. Type species: *Notoxus illigeri* Gyllenhal, 1808: 53, by monotypy. [Dejean lists a second species under *Pelecophora*, but it is a nomen nudum.]

*Pelecophorus*; Berthold, 1827: 589. Misspelling.

*Diglobicerus* Latreille in Cuvier, 1829: 475 – subgenus erected by Latreille for an unnamed species with 10-segmented antennae.

Form elongate, usually with bicolorous cuticle or setae, or both. Setae usually of at least two different types, suberect, erect, recumbent or scale-like, the erect and suberect ones usually of a dark colour, the recumbent ones usually paler. Pronotal setae directed anteriorly towards the head.

*Head* very large and broad, not retractable under pronotum; frons usually with strong subparallel grooves, running from above antennal base to eye; strongly and densely punctured with simple or tuberculate punctures. Eyes comparatively small, oval, glabrous and very prominent. Antennae moderately elongate, usually reaching back to base of pronotum, serrate from 4th segment (Fig. 43). Apical segment of maxillary palp forming an asymmetrical, elongate, almost right-angled triangle (Fig. 33).

*Pronotum* broadest anteriorly or in middle, bordered anteriorly, not always posteriorly; anterior angles varying from acutely pointed or right-angled to obtuse-angled or rounded, posterior angles either well defined or rounded; disc shiny, punctures simple or, occasionally, weakly tuberculate; punctures tuberculate at sides, surface sometimes rugose near posterior angles (Fig. 20). *Scutellum* with sides subparallel, apex broadly obtuse to semicircular, surface usually with small, dense punctures and scale-like or recumbent hair-like pubescence obscuring cuticle. *Elytra* with sides smooth, weakly explanate; punctures large, with long suberect setae, sometimes with patches of very small punctures with scale- or hair-like adpressed setae; epipleura broad, visible from side, deflecting dorsad, inner edge becoming obsolete at about level of 1st or 2nd visible abdominal sternite. *Hind wing* as in Fig. 50. *Tarsi* with segments 1–4 weakly lobed, segment 5 almost as long as remainder together, much broader at apex; claws with large, free membranous appendages. *Prosternal process* well developed, narrow or stout, sometimes broadening posteriorly (Fig. 34), usually on a lower plane than prosternum (about level with ventral side of coxa) and completely dividing front coxae. Prosternum very long. *Length* 3–6 mm.



DISTRIBUTION. Réunion, Mauritius, E. Africa. [Vinson (1957) expresses doubt as to whether the two E. African species (*atricolor* and *jeanneli*) described and provisionally placed in *Pelecophora* by Pic, really belong there.]

MATERIAL EXAMINED

13 species, including the type species.

REMARKS. This genus may be recognized by its very large head, entire, prominent eyes, bicolorous cuticle or setae, large prosternal process and the tuberculate punctures near the sides of the pronotum. It differs from *Malthacodes* mainly in its large unretractable head, pronotal puncturation and complete prosternal process. Its relationship to *Anthriboclerus* is discussed under that genus.

Crowson (1964) transferred *Pelecophora interrupta* Alluaud from the Dasytinae to the Rhadalinae.

Checklist of species

- albonotata* Pic, 1935a: 12. Mauritius.  
*albovillosa* Vinson, 1946: 259. Mauritius.  
*angustata* Pic, 1935: 116. Mauritius.  
*antelmei* Alluaud, 1898: 100. Mauritius, Réunion.  
     *borbonica* Vinson, 1967: 330.  
*atricolor* Pic, 1919: 4. East Africa.  
*concinna* Vinson, 1946: 260. Mauritius.  
*darutyi* Pic, 1932: 42. Mauritius.  
*decorata* Pic, 1911: 151. Réunion.  
*emmerezi* Pic, 1932: 42. Mauritius.  
*hamoni* Vinson, 1953: 144. Réunion.  
*illigeri* (Gyllenhal), 1808: 53. ?Réunion, Mauritius. (*Notoxus*)  
     *obscuricollis* Pic, 1932: 43.  
     *illigeri illigeri* (Gyllenhal), 1808: 53. ?Réunion, Mauritius.  
     *illigeri cariei* Pic, 1932: 42; Vinson, 1957: 5. Mauritius.  
     *illigeri barklyi* Vinson, 1957: 5. Round I., Mauritius.  
*jeanneli* Pic, 1919: 3. East Africa.  
*marginalis* Fairmaire, 1880: 293. Réunion, Mauritius.  
     *obliquata* Alluaud, 1898: 101, Vinson, 1946: 264.  
     *charmoyi* Alluaud, 1898: 102.  
*nigrolineata* Guérin, 1834: 51. Mauritius.  
*pikoi* Vinson, 1957: 2. Round I., Mauritius.  
*subglabra* Alluaud, 1898: 99. Mauritius.  
     *multisignata* Pic, 1935a: 12.  
     *subglabra subglabra* Alluaud, 1898: 99. Mauritius.  
     *subglabra vinsoni* Pic, 1935a: 12; Vinson, 1946: 269.  
*vittata* Laporte de Castelnau, 1840: 283. Réunion, Mauritius.  
     *trimaculata* Pic, 1932: 43.  
     *vittata vittata* Laporte de Castelnau, 1840: 283. Réunion.  
     *vittata interrupta* Alluaud, 1898: 101; Vinson, 1958: 119. Mauritius.

**HEMIPLEURUS gen. n.**

(Figs 9, 26, 28, 30, 37, 44, 47, 51)

Type species: *Hemipleurus floriger* sp. n.

Cuticle unicolorous dark brown to black. Head, pronotum and elytra clothed with sparse, semi-erect setae interspersed with longer, erect, very stout tuberculate setae, with some recumbent, sparse, whitish setae on transverse elytral depression. Ventrally very shiny and sparsely setose.

*Head* small, fairly flat, without diagonal lines, retractable against prosternum, anterior edge of which is strongly posterior to anterior margin of pronotum; punctures small, rimmed but scarcely visible amongst strong microsculpture. Eyes more or less oval, sparsely setose. Antennae moderately elongate, serrate from 4th segment (Fig. 44). Apical segment of maxillary palp forming a right-angled triangle. *Pronotum* transverse, all angles broadly rounded, posterior border distinct, sides weakly crenulate, each crenulation bearing a long stout seta; punctures rimmed but scarcely discernable. *Scutellum* broadly semicircular, scarcely punctate, more or less glabrous. *Elytra* more than twice as long as pronotum, shiny, strongly

punctured; with a distinct transverse depression at about one-third of elytral length from base; humeral swellings unusually prominent (Fig. 30); epipleura very broad at base and visible from side, shiny, almost glabrous, very short, starting to deflect dorsad and becoming obsolete anterior to level of hind coxae (Fig. 9). *Hind wing* with radial cell obsolete and anal cell incomplete (Fig. 51). *Tarsi* with segments 1–4 quite strongly lobed, segment 4 smaller than 3; segment 5 broad at apex; claws with large, free membranous appendages (Fig. 47). *Prosternal process* not extending more than half way between front coxae. *Length* 2.0–2.3 mm.

DISTRIBUTION. Borneo: Sarawak [Mulu].

MATERIAL EXAMINED

Holotype and paratypes (BMNH).

REMARKS. This genus differs from all other known members of the Rhadalinae except *Kubanius* by its very short inwardly deflecting epipleura. From this genus it is easily separated by the form of tarsal segments 1–4, which are broad and strongly lobed (Fig. 47) instead of finely elongate (Fig. 10). It resembles *Anthriboclerus* in its peculiarly depressed elytra with sparse erect elytral setae emerging from tuberculate punctures, and *Malthacodes* in its small, deflexed head. From the last genus it differs in not having diagonal lines (carinae or grooves) on the head.

*Etymology and gender.* *Hemipleurus* is derived from the Greek 'hemi', meaning 'half' and 'pleuron' = 'pleurus', meaning 'side', referring to the epipleura which are approximately half the body length. The name is masculine.

Checklist of species

*floriger* sp. n. Borneo.

*Hemipleurus floriger* sp. n.

Sides of prosternum, epipleura and posterior part of metasternum very shiny, smooth and almost glabrous; femora and visible abdominal sternites also very shiny, with sparse semi-recumbent golden setae, with some longer dark erect setae near abdominal apex. Tibiae with faint longitudinal microsculpture; sides of mesosternum, metasternum and metepisternum with very strong reticulate microsculpture. Colour dark brown to black except for basal 3 segments of antennae which are yellowish brown.

*Head* transverse, mat due to strong microsculpture, punctures scarcely discernible (Fig. 26); setae sparse, very long, black, erect, stout, interspersed with shorter light brown fine semi-erect setae. Eyes moderately prominent. Antennae sparsely setose especially near base, weakly serrate from 4th segment, segments 4–10 only slightly longer than broad, segments 2–3 narrower, more elongate, subequal in length to segments 4–10, segments 1 and 11 longer than others; segments 1–3 light yellowish brown, becoming dark brown to black from segment 4 onwards. Labial palps large, apical segment cup-shaped. *Pronotum* mat, due to strong microsculpture (Fig. 28), sides with small setose tubercles, giving a crenulate appearance; sculpture unusual: a ring of about 7 small circles around each puncture, these thus resembling flowers; setae similar to those on head. *Scutellum* broad, shiny, semicircular, with fine reticulate microsculpture. *Elytra* with sides smoothly rounded except for a few small tubercles near base, giving crenulate appearance; humeral swellings very prominent, with transverse depression posterior to them; punctures large, simple, setae similar to those on head and pronotum except for patch of sparse white, recumbent setae on elytral depression, which forms a transverse band; clusters of very short erect setae emerge from punctures adjacent to most recumbent setae (Fig. 37).

MATERIAL EXAMINED

Holotype ♀, Sarawak: 4th Division Gn. Mulu NP, v–viii. 1978, on logs nr Base Camp, 50–100 m (*Hammond & Marshall*) (BMNH; B.M. No. 1978-49).

Paratypes. Sarawak: 5 ♀, 4th Division Gn. Mulu NP, v–viii. 1978. 2 – on logs nr Base Camp, 50–100 m; 1 – general sweeping, nr camp 4, c. 1800 m; 1 – nr camp 5; 1 – general sweeping, site L 2386 m, upper montane forest (*Hammond & Marshall*) (BMNH; B.M. no. 1978-49).

REMARKS. An unusual feature of this species, not seen on any other species in the subfamily, is the presence of clusters of short erect setae adjacent to the recumbent setae on the elytral depression (Fig. 37). These could be connected with pheromone glands.

*Etymology.* *floriger* = bearing flowers, referring to the strange pronotal sculpture.



**MALTHACODES** Waterhouse

(Figs 8, 35, 41, 42, 46, 52, 53, 54)

*Malthacodes* Waterhouse, 1876: 116. Type species: *Malthacodes pictus* Waterhouse, 1876: 116, by monotypy.

*Xamerpus* Fairmaire, 1886: 41. Type species: *Xamerpus vageguttatus* Fairmaire, 1886: 41, by monotypy. **Syn. n.**

*Donaldia* Alluaud, 1898: 102. Type species: *Donaldia elegans* Alluaud, 1898: 103, by monotypy. [Synonymized by Vinson, 1958: 123.]

Generally light-coloured, often with cuticle and/or setae bicolorous, often with erect setae among semi-erect or recumbent ones. Sometimes partially metallic. Wing venation varying from weak, without an anal cell, to strong, with anal cell distinct (Figs 52–54).

*Head* retractable against prosternum, frons with distinct diagonal groove or line on each side, running from inner side of antennal base to eye; surface shiny, punctures rimmed. Eyes sparsely setose, varying from being very weakly emarginate to entire, fairly prominent. Antennae long, reaching back beyond base of pronotum, serrate from 4th segment; varying from being covered with thick, long, black setae, with segments 6–10 much broader than long (compressed together and half-moon shaped in the type species (Fig. 42)), to sparsely setose and weakly elongate-serrate. Apical segment of maxillary palps triangular. *Pronotum* varying from being very convex in transverse and longitudinal section and at least twice as wide as long (in type species) to much less convex and transverse in other species; sides explanate, weakly crenulate or smooth, distinctly bordered posteriorly, angles usually rounded, punctures small, rimmed, sometimes forming chains, or each (rarely) with an encircling pattern. *Scutellum* broadly triangular or semicircular, shiny, with minute punctures and long fine setae, sometimes so densely punctured and setose that cuticle is obscured. *Elytra* strongly convex, weakly explanate beneath humeral swelling, lateral margin sometimes crenulate; punctures strong, becoming larger towards sides, almost forming a stria; epipleura broad, shiny, deflecting dorsad and becoming obsolete at level of about 2nd or 3rd abdominal sternite, concave and sloping inwards from base so not visible from the side in the broader species, but more horizontal and just visible from the side in the more elongate species. *Hind wing* venation usually weak, without anal cell, but occasionally strong with anal cell distinct (Figs 52–54). *Tarsi* with segments 1–4 weakly lobed (4 slightly smaller), apical segment broader than others; tarsi small, delicate, usually pale yellow or brown and segments 1–3 with very long setae beneath, segmentation often indistinct; [in the 2 Indian species, *M. indicus* (Champion) and *M. moestus* (Gorham), the tarsi are robust and more elongate, less strongly setose beneath, with the segments very distinct, the 4th not as small comparatively;] claws with large free membranous appendages. *Prosternal process* small and narrow but extending between front coxae and fitting into notch in mesosternum. *Length* 1.9–4.3 mm.

**DISTRIBUTION.** Madagascar, Seychelles, Aldabra, Mauritius, Réunion, Rodriguez I., Africa, India, Sri Lanka.

**MATERIAL EXAMINED**

25 species, including syntypes of type species (*pictus* Waterhouse (BMNH), *vageguttatus* (Fairmaire) (MNHN) and *elegans* (Alluaud) (BMNH)) and some unnamed species from Aldabra.

**REMARKS.** This genus contains species that are very variable in appearance and which form distinct species-groups. I believe that the species formerly assigned to *Donaldia* are only one such group. The differences between these and the type species of *Xamerpus* are no greater than the differences between some of the other species of *Xamerpus*. For example, *X. maindroni* (Pic) and *X. cioides* Champion differ markedly from the type species in possessing quite different antennae, a much longer prosternum, a less explanate pronotum, more nearly horizontal (less sloping) epipleura as well as a more elongate form. *Aplocnemus indicus* Champion and *A. moestus* Gorham fall into this group and are here transferred to *Malthacodes*. Apart from the above mentioned characters, these two species have larger, much more elongate tarsi than the type species and may prove to merit separate generic status. Vinson (1958) synonymized *Donaldia* with *Malthacodes* and the only differences found between these two genera is in the wing venation, which is strong in the two species originally assigned to *Malthacodes*, with a distinct anal cell (Fig. 52) and weaker in those assigned to *Donaldia*, with no anal cell (Fig. 54). Most species assigned to *Xamerpus* that I have examined (including the type species (Fig. 53)) have the weak wing venation with no anal cell, but one African species has strong venation with an anal cell so, as the other generic characters are constant, I am treating this as a variation. The only constant external difference between *Malthacodes*, *Donaldia* and *Xamerpus* is that the two former genera have a densely punctured, densely setose scutellum and the species of *Xamerpus* that I have seen have a shiny sparsely setose scutellum. I do not think that this

difference alone is enough to separate the two groups so *Xamerpus* Fairmaire is here synonymized with *Malthacodes* Waterhouse.

*Malthacodes vageguttatus* (*Xamerpus vageguttatus*) has very similar characters to *Malthacodes pictus* (types compared); with the same general broad, rounded, very convex form, and the head tucked under the pronotum. The main differences are the erect and semi-erect dorsal setae, the unusual antennae, the crenulate lateral margins of the pronotum and the fainter wing venation with no anal cell in *M. vageguttatus*.

Crowson (1964) transferred *Malthacodes pictus* Waterhouse, *Donaldia* (= *Xamerpus*) *maindroni* Pic and *X. maculatipennis* Pic to the Rhadalinae from the Dasytinae.

### Checklist of species

- alluaudi* (Pic), 1903: 145 (from *Xamerpus*). Madagascar. **Comb. n.**  
*ambrensis* (Pic), 1931d(445): 101 hors texte (from *Xamerpus*). Madagascar. **Comb. n.**  
*bequaerti* (Pic), 1954a: 211 (from *Xamerpus*). Belgian Congo. **Comb. n.**  
*bourgeoisii* (Fairmaire), 1898: 476 (from *Xamerpus*). Madagascar. **Comb. n.**  
*brevis* (Pic), 1931d(445): 101 hors texte (from *Xamerpus*). Madagascar. **Comb. n.**  
*brunneus* (Pic), 1903: 144 (from *Xamerpus*). Madagascar. **Comb. n.**  
*cinereovariegatus* Blair, 1935: 272. Rodriguez I.  
*cioides* Champion, 1923: 302 (from *Xamerpus*). Seychelles. **Comb. n.**  
*conradsi* (Pic), 1939: 169 (from *Xamerpus*). Tanganyika. **Comb. n.**  
*disconotatus* (Pic), 1931b: 442 (from *Xamerpus*). Madagascar. **Comb. n.**  
*distinctus* (Fairmaire), 1901: 180 (from *Xamerpus*). Madagascar. **Comb. n.**  
*elegans* (Alluaud), 1898: 103 (*Donaldia*; Vinson, 1958: 123). Mauritius, Réunion.  
*elegans elegans* (Alluaud), 1898: 103. Mauritius.  
*elegans bourbonicus* (Pic), 1948: 8 (*Donaldia*, Vinson, 1958: 123; 1967: 330). Réunion.  
*elongatus* (Pic), 1903: 144 (from *Xamerpus*). Madagascar. **Comb. n.**  
*fairmairei* (Alluaud), 1898: 103 (from *Xamerpus*). Madagascar. **Comb. n.**  
*fasciatus* (Pic), 1931d(445): 101 hors texte (from *Xamerpus*). Madagascar. **Comb. n.**  
*gedyei* (Pic), 1938: 300 (from *Xamerpus*). Kenya. **Comb. n.**  
*indicus* (Champion), 1922: 127 (from *Aplocnemus*). India. **Comb. n.**  
*laterufus* (Pic), 1931b: 442 (from *Xamerpus*). Madagascar. **Comb. n.**  
*latesuturalis* (Pic), 1958: 205 (from *Xamerpus*). Guinea. **Comb. n.**  
*luteofasciatus* (Pic), 1914a: 11 (from *Xamerpus*). Madagascar. **Comb. n.**  
*maculatipennis* (Pic), 1937: 28 (from *Xamerpus*), replacement name for *maculatus* Pic, 1926(424): 27 hors texte. E. Africa. **Comb. n.**  
*maindroni* (Pic), 1906: 7 (from *Xamerpus*). India. (*Donaldia*) **Comb. n.**  
*pallidithorax* (Pic), 1906: 6 (*Xamerpus*).  
*bimaculatus* (Pic), 1906: 8 (*Xamerpus*).  
*unimaculatus* (Pic), 1906: 8 (*Xamerpus*).  
*immaculatus* (Pic), 1938a: 158 hors texte (*Xamerpus*).  
*martini* (Fairmaire), 1898: 476 (*Xamerpus*). Madagascar. **Comb. n.**  
*maculatus* (Pic), 1906: 7 (*Xamerpus*).  
*rufithorax* (Pic), 1938a: 158 hors texte (*Xamerpus*).  
*metallicus* (Pic), 1913a: 15 (from *Xamerpus*). Madagascar. **Comb. n.**  
*minor* (Pic), 1932: 46 (*Donaldia*; Vinson, 1958: 124). Mauritius, Réunion.  
*caroli* (Pic), 1948: 8 (*Donaldia*). Mauritius.  
*minutus* (Pic), 1906a: 11 (*Donaldia*, Vinson, 1958: 124). Mauritius, Réunion.  
*notaticeps* (Pic), 1932: 46 (*Donaldia*). Réunion.  
*moestus* (Gorham), 1895: 323 (from *Aplocnemus*). India. (*Dasytes*) **Comb. n.**  
*nigriceps* (Pic), 1931b: 442 (from *Xamerpus*). Madagascar. **Comb. n.**  
*nigricolor* (Pic), 1938a: 158 hors texte (from *Xamerpus*). Natal. **Comb. n.**  
*nigromaculatus* (Pic), 1919: 4 (from *Xamerpus*). E. Africa. **Comb. n.**  
*obscurus* (Pic), 1904a: 28 (from *Xamerpus*). S. Africa. **Comb. n.**  
*oxylepisiformis* (Pic), 1931a: 107 (from *Xamerpus*). Madagascar. **Comb. n.**  
*parvus* **nom. n.** for  
*minutus* Pic, 1931d(443): 96 hors texte (nec Pic, 1906) (*Xamerpus*). Madagascar.  
*perforatus* (Pic), 1917: 5 (from *Xamerpus*). Sri Lanka. **Comb. n.**  
*perrieri* (Fairmaire), 1901: 180 (from *Xamerpus*). Madagascar. **Comb. n.**  
*pictus* Waterhouse, 1876: 116. Rodriguez I.



- rubronotatus* (Pic), 1904: 11 (from *Xamerpus*). Madagascar. **Comb. n.**  
*ruficollis* (Pic), 1931b: 443 (from *Xamerpus*). Madagascar. **Comb. n.**  
*sicardi* (Pic), 1931c: 447 (from *Xamerpus*). Madagascar. **Comb. n.**  
*sinuatus* (Pic), 1953a: 253. (*Donaldia*; Vinson, 1958: 123). Madagascar.  
*subapicalis* (Pic), 1931d(445): 101 hors texte (from *Xamerpus*). Madagascar. **Comb. n.**  
*subdepressus* (Pic), 1939: 169 (from *Xamerpus*). **Comb. n.** Madagascar.  
*subfasciatus* (Pic), 1931a: 108 (from *Xamerpus*). Madagascar. **Comb. n.**  
*suturalis* (Pic), 1931d(445): 101 hors texte (*Donaldia*, Vinson, 1958: 123). Madagascar.  
*trinotatus* (Pic), 1938a: 158 hors texte (from *Xamerpus*). 'B. E. Africa.' **Comb. n.**  
*vageguttatus* (Fairmaire), 1886: 41 (from *Xamerpus*). Madagascar. **Comb. n.**  
*variabilis* (Pic), 1931d(445): 101 hors texte (*Donaldia*; Vinson, 1958: 123). Madagascar.  
*interrupta* (Pic), 1931d(445): 101 hors texte (*Donaldia*).  
*vicinus* (Pic), 1931d(443): 96 hors texte (from *Xamerpus*). Madagascar. **Comb. n.**

### INDIODASYTES Pic

(Figs 17, 24, 45, 55)

*Indiodasytes* Pic, 1916: 14. Type species: *Dasytes* (*Indiodasytes*) *madurensis* Pic, by monotypy. Here transferred from the Dasytinae (Pic, 1937: 29) to the Rhadalinae.

Elongate, head and pronotum black, elytra dark brown. Setae paler, either recumbent or semi-recumbent and sparsely interspersed with much longer, erect setae, these sometimes occurring only along lateral elytral and pronotal margins; pronotal setae point towards centre of disc.

*Head* broader than long, subvertical, mat; frons with strong diagonal ridges at inner side of antennal insertions; with confused punctures. Eyes prominent, oval, almost glabrous. Antennae serrate from 4th segment, these segments not elongate; reaching beyond base of pronotum. Apical segment of maxillary palps triangular. *Pronotum* transverse, sides narrowly explanate and weakly crenulate, bordered posteriorly, strongly punctured with large, rimmed/tuberculate punctures except for a distinct unpunctured shiny longitudinal area in mid line at base; intervals between punctures sometimes raised and shiny; angles rounded (Fig. 24). *Scutellum* shield-shaped, mat or shiny, with minute punctures. *Elytra* with sides weakly explanate and crenulate only near base, sinuate when viewed laterally; epipleura deflecting dorsad at about level of 2nd visible abdominal sternite, visible from side near base (Fig. 17). *Hind wing* of undescribed species from Sri Lanka, as in Fig. 55. *Tarsi* quite stout; claws with large free membranous appendages (Fig. 45). *Prosternal process* narrow, but reaching mesosternum between front coxae. *Length* 2.0–3.7 mm.

DISTRIBUTION. India, Sri Lanka.

#### MATERIAL EXAMINED

Holotype of type species (MNHN) and 2 undescribed species from Sri Lanka (BMNH). *I. pubicornis* Wittmer from China, which was doubtfully placed in this genus by Wittmer (1940), does not belong to it and is not a rhadaline.

REMARKS. This genus strongly resembles *Aplocnemus* in general appearance but differs in its rimmed pronotal puncturation, its diagonal ridges on the head and from most species by its strongly triangular apical segment of the maxillary palps. It also resembles *Malthacodes* but differs from most species in its proportionally larger, less strongly setose tarsi and its stronger pronotal puncturation. It differs from all other genera in the Rhadalinae, that I have examined, by the lack of a dorsal appendage to the median lobe of the aedeagus. However, its other characters, e.g. first two visible abdominal sternites fused, triangular apical segment of the maxillary palps, free membranous appendages to the claws etc., show that it belongs to this group. *Indiodasytes* was listed in the Dasytinae by Pic (1937). It is here transferred to the Rhadalinae.

#### Checklist of species

*madurensis* (Pic), 1916: 14. (*Dasytes*.) India.

### APLOCNEMUS Stephens

(Figs 14, 19, 31, 32, 56)

*Elicopis* Stephens, 1829: 136. Type species: *Crioceris impressa* Marsham, 1802: 226, designated by Stephens, 1830: 316 for the replacement name *Aplocnemus*. [See also Note below.]

*Aplocnemus* Stephens, 1830: 316. Type species: *Crioceris impressa* Marsham, 1802: 226, by original designation. [Replacement name for *Elicopis* – see Note below.]

*Haplocnemus*; Agassiz, 1846[7]: 29, 172. [Unjustified emendation of *Aplocnemus* Stephens.]

*Helicopis*; Agassiz, 1846[7]: 29, 175. [Unjustified emendation of *Elicopis* Stephens and junior homonym of *Helicopis* F. 1807 (Lepidoptera: Riodinidae).]

*Diplambe* Schilsky, 1894: 234 (s.g.). Type species: *Dasytes montivagus* Rosenhauer, 1856: 156, by PRESENT DESIGNATION.

*Holcopleura* Schilsky, 1894: 234 (s.g.). Type species: *Haplocnemus (Holcopleura) reitteri* Schilsky, 1894: 234, by monotypy.

*Ischnopalpus* Schilsky, 1894: 235 (s.g.). Type species: *Haplocnemus (Ischnopalpus) subcostatus* Schilsky, 1894: 235, by subsequent designation (Schilsky, 1894b: no. 62).

*Pseudaphyctus* Pic, 1896: 47 (s.g.). Type species: *Haplocnemus (Pseudaphyctus) tournieri* Pic, 1896: 47 [= *Haplocnemus tumidus* Kiesenwetter, 1863: 650], by monotypy.

*Note.* Thomson (1859: 109) designated *Lagria nigricornis* Fabricius (1792: 81) as type species of *Aplocnemus*. This was not only unnecessary but invalid, because it was not included in the original description of *Aplocnemus*.

The present genus was first recognized by Stephens under the name *Elicopis* (1829: 136), but later, he thought that the name was 'too closely allied to *Hellicopis*' [= *Helicopis*] F. (1807), and he changed it to *Aplocnemus* (1830: 316). Since the latter name has been in use for over 150 years, I suggest that it is conserved on the grounds of long usage (1985, *International Code of Zoological Nomenclature*, Article 23(b)). In the interest of stability, a case should be made to the International Commission.

Unicolorous brown to black (mostly black), often with a metallic bluish or greenish tinge, legs and base of antennae often lighter. Dorsum usually covered with erect or semi-erect long fine setae, legs and abdominal sternites with similar but more recumbent setae; almost invariably with a few very long, erect setae on tibiae among the recumbent ones; setae usually black but sometimes grey, golden or white. Tibiae often with spines. Elytral setae sometimes alternately erect and semi-erect.

*Head* moderately small, shiny or mat with strong simple punctures; frons usually with two short parallel depressions at inner side of antennal insertions. Eyes prominent, sparsely setose, oval or weakly emarginate. Antennae serrate or pectinate from 3rd or 4th segment, apical segment elongate-oval, length varying from barely reaching base of pronotum to reaching well beyond it. Apical segment of maxillary palps varying from spindle-shaped (rarely) (Fig. 32) to hatchet-shaped (Fig. 31). *Pronotum* transverse; sides narrowly explanate, finely crenulate or smooth, usually bordered anteriorly and posteriorly; base sinuate; disc finely and sparsely or strongly and densely punctured with simple punctures (Fig. 19), only rarely punctures weakly rimmed on disc or at sides. *Scutellum* shiny, quite strongly punctured, broadly triangular or semicircular. *Elytra* with sides weakly explanate near base, crenulate or smooth (in subgenus *Diplambe* Schilsky the elytra are double-sided in basal half, i.e. a carina runs subparallel to elytral edge, as also in *Rhadalus*); epipleura deflecting dorsad at about level of 2nd, 3rd or 4th visible abdominal sternite, often visible from side near base. *Hind wing* venation variable, but usually distinct (Fig. 56). *Tarsi* moderately elongate, segments 1–4 weakly lobed; claws with large free membranous appendages which sometimes appear to be sclerotized along side nearest claw (Fig. 14). Legs moderately slender. *Prosternal process* apparently short, not separating front coxae, usually with fine process which extends for length of coxa but is hidden from below by contiguous coxae. *Length* 2.9–6.9 mm.

**DISTRIBUTION.** Palaearctic (including N. Africa), Asia Minor, W. Africa (Ivory Coast, Angola), Philippine Is (1 species).

#### MATERIAL EXAMINED

About 100 species (including syntypes of type species (BMNH)).

**REMARKS.** This genus is very large and variable, mostly with the general appearance of being black and hairy. Its most constant characters are the tarsi and claws, head and maxillary palp shape and the (almost constant) long suberect setae. Most species are readily recognized by their dark coloration, elongate form and hairy appearance. They are usually dark brown or black, sometimes metallic. One species from the Canary Is differs from the majority in its almost recumbent dorsal setae. Other Canarian species tend to be of a light yellowish brown colour wholly or in part. Most species resemble *Trichoceble* in general appearance but may be easily distinguished by the presence of membranous appendages and the lack of chitinised teeth on the claws, as well as by the less strongly emarginate eyes. They may be distinguished from all other genera except *Semijulistus* and *Microjulistus* by the only moderately securiform apical segment of the maxillary palps (spindle-shaped in some species). Most other genera have distinctly



triangular apical segments. They differ from *Malthacodes* in their simple (non-rimmed) pronotal punctures and the lack of diagonal ridges on the head. (The Indian species, *Aplocnemus indicus* Champion and *moestus* Gorham are here transferred to *Malthacodes*. They differ from *Aplocnemus* in their weaker wing venation, triangular apical segment of the maxillary palps, diagonal lines on head, pronotal puncturation and the form of the male genitalia).

Crowson (1964) verified that *Aplocnemus palaestinus* Baudi, *A. (Diplambe) abietum* Kiesenwetter and *A. (Ischnopalpus) subcostatus* Schilsky belong in the Rhadalinae. They were previously placed in the Dasytinae (Pic, 1937).

### Checklist of species

- abietum** Kiesenwetter, 1859: 171. Mediterranean Region.  
**acutangulus** Schilsky, 1897a: no. 92. Algeria, Italy.  
**adanensis** Pic, 1908a: 50. Turkey.  
**aerosus** Schilsky, 1897a: no. 97. Spain.  
**aestivus** Kiesenwetter, 1863: 654. Europe.  
     *subviolaceus* Pic, 1922: 27. Austria.  
**afer** Schilsky, 1897b: no. 33. Algeria.  
**akbesianus** Pic, 1896: 48. Syria.  
**albipilis** Kiesenwetter, 1863: 651. Spain.  
**algericus** Schilsky, 1894b: no. 73. Algeria.  
**alluaudi** Pic, 1900: 165. Tunisia.  
**alpestris** Kiesenwetter, 1861: 385. Europe.  
     *pectinicornis* (Dufour), 1851: 329. (*Dasytes*)  
     *tarsalis*; Schilsky, 1897b: no. 34LL; Lohse, 1977: 178; Majer, 1982: 435. S. Europe.  
     *theresae* Pic, 1914: 57. France.  
**alternatus** Peyerimhoff, 1931 (1932): 1. Morocco.  
     *cribripennis* Pic, 1922: 27. Algeria.  
     *nigrescens* Pic, 1949: 74.  
**anatolicus** Schilsky, 1903: no. 97. Turkey.  
     *subelongatus* Pic, 1910: 9.  
**andalusicus** (Rosenhauer), 1856: 158. Spain. (*Dasytes*)  
     *laetus* Schilsky, 1897b: no. 34HH.  
**angolanus** Wittmer, 1953: 285. Angola.  
**atricornis** Pic, 1921: 3. Greece.  
**aubei** Kiesenwetter, 1867: 122. Pyrenees, Spain.  
**baborensis** Pic, 1908: 200. Algeria.  
**baborensis** Pic, 1922: 26. Algeria. [Homonym of *baborensis* Pic 1908.]  
**barnevillei** Kiesenwetter, 1867: 121. Spain.  
**basalis** (Küster), 1849: no. 19. S. Europe. (*Dasytes*)  
     *distinctipes* Pic, 1908a: 50. Corfu.  
**beauprei** Pic, 1909: 105. Tunisia.  
**berytensis** Sahlberg, 1913: 45. Syria.  
**bicoloratus** Pic, 1935b: 15. Morocco.  
     *theryi* Pic, 1935b: 15.  
**biskraensis** Schilsky, 1897a: no. 96. S. Algeria.  
     *biscrensensis* Schilsky, 1897b: no. 34QQ.  
     *biskrensensis* Schilsky, 1897b: no. 63.  
     *gridellii* Pic, 1928: 103.  
**brevis** (Rosenhauer), 1856: 161. Spain. (*Dasytes*)  
**brevissimus** Pic, 1908a: 50. Greece.  
     *holtzi* Pic, 1908a: 50.  
**breviusculus** Schilsky, 1897b: nos 31 & 34CC.  
**caelatus** Brullé, 1832: 151. Greece.  
**calidus** Mulsant & Rey, 1868: 235. S. France, Italy.  
**capillicornis** Abeille, 1907: XXI. S. France.  
**caramanicus** Sahlberg, 1913: 46. Caramania.  
**caroli** Pic, 1941: 1. Morocco.  
**castiliensis** Schilsky, 1897b: nos 41 & 34FF. Spain.  
**caucasicus** Schilsky, 1897a: no. 89. U.S.S.R.: Caucasus.

- chalconatus* (Germar), 1817: 209. S. Europe. (*Dasytes*)  
*aestivus* Kiesenwetter, 1863: 654 (partim); Majer, 1982: 442. Europe.  
*pinicola* Kiesenwetter, 1863: 653 (partim females) nec *pinicola*: Lohse, 1977; Majer, 1982: 442.  
 S. Europe.
- chlorosoma* (Lucas), 1849: 199. N. Africa, Italy, Sardinia. (*Dasytes*)  
*cuprea* (Lucas), 1849: 199.
- cobosi* Pic, 1953: 144. Spain.
- coeruleatus* (Rosenhauer), 1856: 160. Spain. (*Dasytes*)
- consobrinus* (Rosenhauer), 1856: 157. Spain. (*Dasytes*)
- corcyricus* Miller, 1866: 818. Corfu, S. Italy.
- crenicollis* Kiesenwetter, 1863: 654. Italy, Sardinia.  
*duplicatus* Kiesenwetter, 1871: 85.
- cribrarius* (Brullé), 1832: 151. Greece. (*Dasytes*)
- cribricollis* Mulsant & Rey, 1868: 234. Corsica, Sardinia.
- cribripennis* Pic, 1921: 3. Greece.
- cribrosus* Schilsky, 1897*b*: nos. 44 & 34GG. Algeria.  
*festai* Pic, 1925: 2.  
*robustior* Pic, 1928: 103.
- croceicornis* Kiesenwetter, 1863: 649. U.S.S.R.: Sarepta.
- cupreatus* Schilsky, 1897*a*: no. 88. U.S.S.R.: Caucasus.
- curticornis* Pic, 1910: 9. Morocco.
- curtipennis* Pic, 1908: 200. Algeria.
- curtus* Pic, 1921: 3. Algeria.
- cylindricus* Kiesenwetter, 1863: 651. S. Europe.
- cyrenaicus* Pic, 1955: 132. Libya.
- delagrangi* Pic, 1902: 32. Syria.
- dentatus* Schilsky, 1897*a*: no. 100. Algeria.
- depressicollis* Schilsky, 1897*b*: nos 52 & 34LL. Kurdistan.
- desertorum* Pic, 1896: 48. Algeria.  
*rufofemoratus* Pic, 1908*a*: 49.
- diaphanus* Schilsky, 1897*a*: no. 94. Algeria.
- difficilis* Holdhaus, 1923: 137. Italy.
- escalerai* Pic, 1908*a*: 90. Spain.  
*escalerai escalerai* Pic, 1908*a*: 90.  
*escalerai colasi* Pic, 1954: 97.
- eumerus* Mulsant & Rey, 1868: 194. France.  
*marchali* Pic, 1914: 57.
- fauconneti* Pic, 1914: 57. C. France.
- flavicornis* Schilsky, 1987*a*: no. 87. U.S.S.R.: Caucasus.  
*areschanus* Pic, 1908*a*: 81.
- fortepunctatus* Pic, 1935*b*: 15. Morocco.
- geniculatus* Schilsky, 1903: no. 98. Turkey.
- gestroi* Schilsky, 1897*b*: nos 58 & 34NN. Algeria, Tunisia.
- gracilicornis* Schilsky, 1987*b*: nos 36 & 34DD. Spain.
- grancanariensis* Lindberg, 1953: 7. Canary Is.
- griseopubescens* Pic, 1899: 259. Palestine (sic).
- hebraicus* Schilsky, 1906: no. 13. Palestine (sic).
- heydeni* Schilsky, 1894*b*: no. 81. Algeria, Turkey.
- hickeri* Pic, 1935*c*: 256. Turkey.
- hierichunticus* Sahlberg, 1913: 42. Palestine (sic).
- hispanicus* Pic, 1953: 143. Spain.
- imperfioratus* Pic, 1908*a*: 49. Tunisia.
- impressipennis* Pic, 1921: 5. Italy.
- impressus* (Marsham), 1802: 226. N. & C. Europe. (*Crioceris*)  
*pini* (Redtenbacher), 1849: 335. (*Dasytes*)  
*serratus* (Redtenbacher), 1849: 335. (*Dasytes*)
- incognitus* (Faldermann), 1836: 204. U.S.S.R.: Caucasus. (*Dasytes*)
- integer* Baudi, 1873: 302. Italy.
- jejunos* Kiesenwetter, 1863: 652. S. Europe, N. Africa.



- kaszabi** Majer, 1982: 431. C. Europe.  
**kiesenwetteri** Schilsky, 1897*b*: nos 50 & 34KK. Greece, S. Europe.  
**korbi** Schilsky, 1897*b*: nos 49 & 34HH. Spain.  
*diversus* Schilsky, 1897*b*: nos 49 & 34HH.  
**koziarowiczi** Desbrochers des Loges, 1870: 122. Corsica, Italy.  
*xanthopus* Kiesenwetter, 1871: 85.  
*rufomarginatus* Schilsky, 1894*b*: no. 85.  
**krugeri** Pic, 1929: 94. Cyrenaica (sic).  
**kubanensis** Pic, 1909: 99. U.S.S.R.: Caucasus.  
**laco** Majer, 1985: 35. C. Europe.  
**lateralis** Schilsky, 1894*b*: no. 71. U.S.S.R.: Caucasus.  
**latior** Pic, 1908*a*: 50. Greece.  
**latipennis** Pic, 1911: 146. Syria.  
*rechmayanus* Pic, 1911: 169. Lebanon.  
**libanicus** Pic, 1901: 9. Syria.  
*laetipes* Abeille, 1907: XXII.  
**limbipennis** Kiesenwetter, 1865: 383. Spain.  
**longicornis** Kocher, 1962: 196. Morocco.  
**longulus** Schilsky, 1897*a*: no. 91. N. Africa, Italy.  
*brunnescens* Pic, 1922: 27.  
**macedonicus** Pic, 1922: 17. Macedonia.  
**mancinii** Pic, 1927: 14. Capri.  
*capraianus* Pic, 1931: 159.  
**margincollis** Schilsky, 1897*b*: nos 39 & 34EE. Algeria.  
**maurus** Schilsky, 1895: no. 18. Algeria.  
**melitensis** Schilsky, 1897*b*: nos 60 & 34OO. Malta.  
**mirabilis** Schilsky, 1897*a*: no. 99. Algeria.  
**mohamed** Chobaut, 1898: 78. S. Algeria.  
**montivagus** (Rosenhauer), 1856: 156. Spain, Sardinia. (*Dasytes*)  
**morio** (Schönherr), 1817: 12. Morocco. (*Dasytes*)  
**nevadensis** Pic, 1908*a*: 90. Spain.  
**nigricornis** (Fabricius), 1792: 81. N. & C. Europe. (*Lagria*)  
*femoralis* Illiger, 1807: 302.  
*punctatus* (Germar), 1824: 77. (*Dasytes*)  
*chalybeus* (Germar), 1824: 78. (*Dasytes*)  
*fuscitibia* Mulsant & Rey, 1868: 247.  
*variolatus* Costa, 1882: 35.  
*'femoralis'* Schilsky, 1897 – incorrect subsequent spelling of *femoratus*.  
*femoratus* Schilsky, 1897*b*: nos 46 & 34FF; Majer, 1982: 430. Hungary.  
*viertli* Schilsky, 1897*b*: nos 46 & 34FF; Majer, 1982: 430.  
*rufolateralis* Pic, 1914: 57.  
*testaceofemoralis* Pic, 1917: 22.  
**nigripes** Mulsant & Rey, 1868: 223. Algeria.  
**palaestinus** Baudi, 1873*a*: 319 (Note 1). Israel, Syria.  
**parumpunctatus** Schilsky, 1897*b*: nos 53 & 34LL. U.S.S.R.  
**pectinatus** (Küster), 1849: no. 18. Sardinia, Corsica, Capri. (*Dasytes*)  
*erosus* Mulsant & Rey, 1868: 233.  
**pectinicornis** (Lucas), 1849: 200. Algeria. (*Dasytes*)  
**pellucens** Kiesenwetter, 1865: 383. Spain.  
**perforatus** Schilsky, 1897*b*: nos 35 & 34CC. Algeria.  
**persicus** Schilsky, 1897*b*: nos 37 & 34DD. Iran.  
**pertusus** Kiesenwetter, 1859: 172. Greece, Turkey, Cyprus.  
*elongatior* Pic, 1902: 32.  
*adaliensis* Pic, 1908*a*: 50.  
**pesruchesi** Schilsky, 1897*a*: no. 90. Algeria.  
**peyroni** Pic, 1899: 259. Syria.  
**philippinus** Wittmer, 1941: 226. Luzon.  
**ponferradanus** Pic, 1913: 105. Spain.  
**pristocerus** Kiesenwetter, 1859: 170. Greece, Corfu.

- pulverulentus* (Küster), 1849: no. 17. Hungary, Turkey, Dalmatia, Italy. (*Dasytes*)  
*obscurus* Germar, 1817: 209.
- puncticollis* Sahlberg, 1913: 40. Turkey.
- punctiger* Schilsky, 1897a: no. 98. U.S.S.R.: Caucasus.
- quercicola* Mulsant & Rey, 1868: 235. C. France.
- raffrayi* Pic, 1908: 51. Italy.
- ragusae* Schilsky, 1894b: no. 68. Italy.
- ramicornis* Kiesenwetter, 1863: 651. U.S.S.R.: Sarepta.
- raymondi* Deville, 1908: 218. Corsica.  
*xanthopus* Schilsky, 1897b: nos 40 & 34EE.
- reitteri* Schilsky, 1894: 234. Turkey.
- rufipes* Miller, 1862: 345. Greece, Macedonia.  
*taygetanus* Pic, 1908a: 50.  
*semicaeruleus* Pic, 1922: 17.
- rufomarginatus* Perris, 1869: 18. N. Africa, Italy, Corsica, Sardinia, S. France.  
*marginatus* Rottenberg, 1870: 243. Algeria.  
*edoughensis* Pic, 1897: 41.
- rugicollis* Schilsky, 1897a: no. 95. Algeria.
- rugulosus* (Rosenhauer), 1856: 159. Spain. (*Dasytes*)  
*subcoeruleus* Pic, 1908a: 90.  
*mateui* Pic, 1954: 97.
- russicus* Reitter, 1890: 148. U.S.S.R.: Caucasus.
- sanctus* Pic, 1902: 32. Palestine (sic).
- sculpturatus* Wollaston, 1862: 447. Canary & Madeira Is.  
*tenerifensis* Pic, 1922: 17.
- serbicus* Kiesenwetter, 1863: 653. Yugoslavia, Hungary, U.S.S.R.: Crimea.  
*tibiellus* Schilsky, 1897b: no. 34MM. U.S.S.R.
- serratus* (Brullé), 1832: 152. Greece. (*Dasytes*)
- serrulatus* Schilsky, 1906: no. 100. Spain.
- siculus* Kiesenwetter, 1863: 654. Italy, Algeria, Tunisia.  
*fulvipes* Schilsky, 1894: 230.  
*flavipes* Schilsky, 1897b: no. 59.  
*obscuripes* Schilsky, 1897b: no. 59.
- similis* Schilsky, 1906: no. 99. Turkey.
- smyrnensis* Pic, 1901: 18. Turkey.
- strandii* Marcu, 1936: 518. NE. Rumania.
- subcostatus* Schilsky, 1894b: no. 62. N. Africa.  
*bonnairei* Pic, 1894a: 112.  
*viberti* Pic, 1922: 27.
- subinteger* Pic, 1902a: 60. Mesopotamia.
- suggara* Peyerimhoff, 1929: 193. Algeria, Egypt.  
*suggara suggara* Peyerimhoff, 1929. Algeria.  
*suggara alfierii* Wittmer, 1938: 169. Egypt.
- syriacus* Schilsky, 1894: 235. Syria, Israel.  
*caerulescens* Schilsky, 1897b: no. 34DD.
- tarsalis* (Sahlberg), 1822: 113. N & C. Europe. (*Dasytes*)  
*rufitarsis* (Sahlberg), 1822: 113. (*Dasytes*)  
*virens* (Küster), 1849: no. 21; Lohse, 1977: 178. (*Dasytes*)  
*pinicola* Kiesenwetter, 1863: 653; Lohse, 1977: 178; partim females (nec *pinicola*: Lohse, 1977);  
Majer, 1982: 442.  
*kuesterei* Schilsky, 1894a: 331; Lohse, 1977; 178. Germany.  
*pandellei* Pic: 1918: hors texte 7.
- tarsicola* Sahlberg, 1913: 43. Syria.
- testaceipes* Pic, 1932a: 27. Morocco.
- thalensis* Pic, 1930: 1. Tunisia.
- thessalicus* Pic, 1908a: 49. Greece.
- tingitanus* Baudi, 1873: 300. Morocco.  
*lixensis* Bourgeois, 1911: 158.  
*subacuminatus* Pic, 1934: 21.



- trinacriensis* Ragusa, 1872: 83. Italy, N. Africa.  
*tuberculifer* Motschulsky, 1850: 364. Germany.  
*tumidus* Kiesenwetter, 1863: 650. Morocco, Spain.  
*tourneri* Pic, 1896: 47.  
*tuniseus* Pic, 1908a: 50. Tunisia.  
*turcicus* Schilsky, 1897b: nos 30 & 34CC. Turkey.  
*uhagoni* Schilsky, 1897a: no. 86. Spain.  
*venustulus* Schilsky, 1897a: no. 93. U.S.S.R.: Caucasus.  
*vestitus* Wollaston, 1862: 447. Canary Is.  
*virens* (Suffrian), 1843: 337. S. & C. Europe. (*Dasytes*)  
*ahenus* Kiesenwetter, 1863: 652.  
*tibialis* Schilsky, 1894a: 331.  
*virens virens* (Suffrian), 1843: 337. S. & C. Europe.  
*virens orientalis* Lohse, 1977: 178. W. Germany.  
*viridescens* Pic, 1935b: 15. Morocco.

### KUBANIUS Majer

(Figs 10, 11, 40)

*Kubanius* Majer, 1983: 385. Type species: *Kubanius elegans* Majer, 1983: 387, by original designation.

Body with a metallic sheen, sparsely punctured; of rather flattened, soft-bodied appearance, with fine, elongate legs and tarsi. Body, femora and tibiae sparsely clothed with long, fine suberect setae, tibiae with some fine spines among the setae; tarsi with shorter setae and some short spines. Abdominal sternites with fine, sparse, recumbent setae. [Of the 2 species seen, one, *K. elegans*, is unicolorous black, the other (undescribed) has a brown to black, metallic, head, pronotum and ventral side with yellowish brown elytra and antennae and light yellow legs.]

*Head* large, broader than or nearly as broad as anterior part of pronotum; punctures small, sparse, rimmed or simple; cuticle with microsculpture or smooth and shiny; short longitudinal groove present, on each side of frons at inner side of antennal insertion. Eyes weakly reniform, sparsely setose. Antennae very long or of moderate length, not markedly sexually dimorphic, reaching back well beyond base of elytra, segments 5–10 large and strongly serrate (Fig. 40). Apical segment of maxillary palps securiform. *Pronotum* small, subquadrate or elliptical, weakly transversely convex, almost flat on disc; sides weakly explanate, lateral margins smoothly rounded; anterior angles rounded, posterior angles either distinct or obsolete; posterior margin strongly bordered; punctures small, sparse, simple, rimmed or weakly tuberculate on disc; cuticle between punctures shiny, with or without microsculpture. *Scutellum* shiny, semicircular, sparsely punctured. *Elytra* flat on disc, broadening out at sides from shoulder in a weak curve and turned down sharply at apices, the widest part being at about one-third of elytral length from apex; punctures strong, cuticle transversely rugose; epipleura very short, deflecting dorsad well before level of hind coxae. *Hind wing* venation similar to that of *Trichoceble* (figured by Majer, 1983). *Tarsi* (hind) long, subequal in length to tibiae, with spiky ventral combs; claws with large blunt teeth and very small, inconspicuous membranous appendages (Figs 10, 11). Tibiae with fine spines. *Prosternal process* not produced between front coxae, which are very strongly projecting and contiguous. (Metasternum with very strong median longitudinal groove.) *Length* 2.0–4.1 mm.

*DISTRIBUTION.* U.S.S.R. (Kazakhstan), N. India.

#### MATERIAL EXAMINED

1 paratype (BMNH) [the holotype is in the National Museum, Prague and there are more paratypes in Majer's collection], and 6 examples of an undescribed species from N. India (BMNH).

*REMARKS.* Majer used the sharply declining apices of the elytra to separate *Kubanius* from other genera, but as the elytra are rather soft it is possible their curvature may be due to the way the insects dried out after killing. However, the genus is a very distinctive member of the Rhadalinae, closely resembling *Trichoceble* in the form of the tarsi and subparallel grooves on the head. The antennae also are very similar to those of some species of *Trichoceble* but the pronotum is much less transverse and convex, the elytra less densely punctured, the prosternal process is obsolete and the epipleura much shorter. *Hemipleurus* gen. n. also has short, inwardly deflecting epipleura but is otherwise dissimilar.

#### Checklist of species

*elegans* Majer, 1983: 387. U.S.S.R. (Kazakhstan).

**TRICHOCEBLE** Thomson

(Figs 12, 13, 23, 39, 57)

*Trichocele* Thomson, 1859: 109. Type species: *Melyris floralis* Olivier, 1790: 11, by original designation.  
*Julistus* Kiesenwetter, 1859: 174. Type species: *Julistus funera* Kiesenwetter, 1859: 175, by PRESENT DESIGNATION.

Unicolorous black or dark brown or with legs and antennal base lighter, clothed with fine erect or semi-erect unicolorous setae, ranging from golden or grey to black. Ventral pubescence recumbent. Tibiae with short setae.

*Head* smooth or with an insignificant, short longitudinal groove on each side of frons at inner side of eye and antennal insertion; punctures small, sparse, simple. Eyes emarginate, either strongly setose or glabrous. Antennae very long and strongly pectinate or serrate from 3rd to 5th segment (some females with shorter antennae than males but these still extend well back beyond shoulder). Apical segment of maxillary palps longitudinally triangular. *Pronotum* strongly transverse, convex, subelliptical, with very rounded smooth or finely crenulate sides; either all angles rounded or some obtuse; posterior border present; cuticle smooth, shiny, sometimes rugose near base, punctures small on disc (Fig. 23), becoming larger towards sides, usually simple but occasionally rimmed and becoming weakly tuberculate near sides. *Elytra* gradually broadening from shoulder so that broadest part is about one-third of elytral length from apex; of rather smooth appearance, densely punctured, punctures tending to be linked transversely by shallow grooves, forming transverse lines; lateral margins very narrowly explanate; humeral swellings moderately prominent; epipleura fairly long, weakly deflecting dorsad along their length, so not visible from side, evanescing at about level of 2nd abdominal sternite. *Hind wing* as in Fig. 57. *Tarsi* (hind) not as long as tibiae (cf. *Kubanius*); claws appendiculate, apices of teeth usually pointed (Figs 12, 13) but occasionally blunt. (Legs slender.) *Prosternal process* projecting about half way between front coxae and sloping to a lower plane than prosternum. *Length* 3.0–7.0 mm.

DISTRIBUTION. C., E. and S. Europe, Turkey, Armenia, Kurdistan, Caucasus, Turkestan, Tibet, India, China.

## MATERIAL EXAMINED

12 species (including type species).

REMARKS. *Trichocele* is very closely related to *Kubanius* (q.v.) and *Antinea*. It differs from the latter in possessing membranous wings, larger reniform eyes and shorter temples. It differs from *Aplocnemus* in its lack of membranous appendages on the claws. *Trichocele cincta* Pic from Kurdistan could possibly be a different genus as its wing venation is much weaker and no anal cell is present. It also differs in having a narrower pronotum, strongly rimmed punctures with a pattern round each one (making them look flower-like). Also, it is light brown, except for the black head, which is not the usual coloration in *Trichocele*.

Seidlitz (1891) synonymized *Trichocele* and *Julistus*. Although they were both described in the same year, *Trichocele* was published first. Thomson's book (containing his description of *Trichocele*) is reviewed in the 'Neuere Literature' of the same part of *Berliner Entomologische Zeitschrift*, vol. 3 as that in which *Julistus* is described. Crowson (1964) transferred *Trichocele* to the Rhadalinae from the Dasytinae, on the basis of the examination of *T. floralis* (Olivier) and *Julistus* [= *T.*] *oertzeni* Schilsky. He also verified that the larval characters of *T. memnonia* (Kiesenwetter) were similar to those of *Aplocnemus*.

**Checklist of species**

- araratica* Yablokov-Khinzoryan, 1978: 243. Armenia.  
*arbustorum* (Kiesenwetter), 1859: 176. Greece. (*Julistus*)  
*cincta* Pic, 1929b: 1. Kurdistan.  
*convexa* Pic, 1909: 113. Syria.  
*curta* (Baudi), 1873: 297. Dalmatia, Turkey. (*Julistus*)  
*elongata* Schilsky, 1897a: no. 85.  
*floralis* (Olivier), 1790: 11. C. & S. Europe, U.S.S.R. (*Melyris*)  
*floricola* (Kiesenwetter), 1861: 386. (*Julistus*)  
*fulvopilis* (Reitter), 1889: 25. U.S.S.R.: Caucasus. (*Julistus*)  
*funera* (Kiesenwetter), 1859: 175. SE. Europe, Greece, Italy. (*Julistus*)  
*grandis* Schilsky, 1896: nos 90 & 32P. Syria.  
*griseohirta* (Reitter), 1885: 380. Crete. (*Julistus*)  
*heydeni* Schilsky, 1897: 155. China.



- immarginata* Reitter, 1902: 257. Turkey.  
*laeta* Majer, 1986: 303. Mongolia.  
*lederi* Schilsky, 1896: nos 92 & 32P. U.S.S.R.: Caucasus.  
*longicornis* (Kiesenwetter), 1863: 647. Syria. (*Julistus*)  
*major* Pic, 1922: 17. Greece.  
*mediocris* Majer, 1986: 306. Mongolia.  
*memnonia* (Kiesenwetter), 1861: 385. C. Europe, Germany, France, U.S.S.R.: Caucasus. (*Julistus*)  
*fulvohirta* (Brisout de Barnville), [1862]: 601; Lohse, 1977: 182. (*Julistus*)  
*semirufescens* (Pic), 1915: 22. (*Julistus*)  
*nigra* Pic, 1921: 4. Greece.  
*oculata* Schilsky, 1896, nos 98 & 32Q. Greece.  
*ocularis* Reitter, 1902: 260.  
*oertzeni* Schilsky, 1896: nos 91 & 32P. Crete.  
*pallidipes* (Pic), 1944: 12. China. (*Julistus*)  
*ramicornis* Schilsky, 1900: no. 4. Turkestan.  
*schatzmayeri* Pic, 1909: 113. Macedonia.  
*schilskyi* Reitter, 1902: 259. U.S.S.R.: Caucasus.  
*sparsepunctata* Pic, 1921: 4. Turkey.  
*subcaerulea* Pic, 1921: 4. Greece.  
*subcoriacea* Reitter, 1902: 260. Greece.  
*testaceipes* Pic, 1921: 4. Cyprus.  
*torretassoi* Wittmer, 1935: 254. Rhodes.  
*unguicularis* Reitter, 1902: 258. Turkey.  
*unicolor* Pic, 1932b: 251. China.

### ANTINEA Peyerimhoff

*Antinea* Peyerimhoff, 1929: 191. Type species: *Antinea saxicola* Peyerimhoff, 1929: 191, by monotypy.

Unicolorous dark brown. Dorsum covered with fairly short semi-erect setae; humeral swellings obsolete. Apterous.

*Head* large, nearly as long as broad, temples long, at least twice length of eye when seen from above; frons flat or with a weak depression at each side between eyes; shiny with small, simple punctures. Eyes small, flat, oval. Antennal segments 3–6 weakly and 7–10 strongly serrate, segment 11 elongate-oval. *Pronotum* strongly transverse, elliptical, all angles rounded, sides rounded, margins crenulate, strongly punctured with small simple punctures, without obvious borders. *Scutellum* subsemicircular, with strong puncturation. *Elytra* with sides curved, narrowly explanate and finely crenulate; humeral swellings obsolete; epipleura extending to about level of 2nd visible abdominal sternite. *Hind wings* absent. *Tarsi* elongate, segments 1–4 weakly lobed, claws fine, with minute teeth. Legs slender with long, stout tibial spurs; hind tibiae longer than front and middle tibiae. *Prosternal process* very short, not produced between front coxae. *Metasternum* unusually short, distance from middle coxa to hind coxa about as long as the longitudinal diameter of a hind coxa. *Length* 4 mm.

DISTRIBUTION. N. Africa (Sahara).

MATERIAL EXAMINED  
 Syntype (BMNH).

REMARKS. *Antinea* is most closely related to *Trichocele* (q.v.). It was listed in the Dasytinae by Pic (1937) and is here transferred to the Rhadalinae.

### Checklist of species

*saxicola* Peyerimhoff, 1929: 191. N. Africa (Sahara).

### SEMIJULISTUS Schilsky

(Figs 1, 3, 5, 6, 7, 38, 58)

*Semijulistus* Schilsky, 1894: 227 (included in the rhadaline group by Majer, 1983: 387). Type species: *Dasytes callosus* Solsky, 1867: 32, by original designation.

*Celsus* Lewis, 1895: 118. (Here transferred from the Dasytinae (Pic, 1937: 56).) Type species: *Celsus spectabilis* Lewis, 1895: 119, by monotypy. **Syn. n.**

*Eurelymis* Casey, 1895: 600. (Here transferred from the Melyrinae (Pic, 1929: 17; Blackwelder, 1975: R67, 11.) Type species: *Eurelymis speculifer* Casey, 1895: 603, by PRESENT DESIGNATION. **Syn. n.**

Colour varying from black to dark, light, or reddish brown, often with elytra and pronotum different in colour or shade, legs sometimes lighter than body. Body clothed with very short, sparse, adpressed sometimes scale-like setae.

*Head* tending to be longer than broad, retractable under pronotum, frons without lines or depressions except for a faint short longitudinal groove mid way between eyes; punctures weakly rimmed, sometimes confused. Eyes slightly emarginate when seen from above, glabrous. Antennae short, not usually reaching beyond base of pronotum, serrate from segment 4, apical five or six segments often much more broadly serrate than the basal segments, giving an almost clubbed appearance (Fig. 1); sexually dimorphic. Apical segment of maxillary palps feebly securiform, sides subparallel, sensory surface diagonal. *Pronotum* broader than long, but not markedly so, sides serrate, evenly arcuate and visible from above; narrower than base of elytra, without anterior or posterior borders; all angles rounded; punctures rimmed, often very dense and confused and becoming tuberculate at sides making margin appear serrated, each tubercle with a forwardly directed curved seta; sublateral setae directed towards disc. *Scutellum* subquadrate. *Elytra* elongate, subparallel-sided, about twice as long as broad; strongly punctured; epipleura very narrow at level of hind coxae and continuing as a very narrow line which deflects laterad and evanesces altogether at about level of 2nd or 3rd visible abdominal sternite. The female is characterised by the presence of an oval, raised, shiny, unpunctured area on the apical third of each elytron (Fig. 6), except in one Japanese species, *S. elongatus* (Nakane). *Hind wing* with anal cell elliptical (Fig. 58). *Tarsi* simple, elongate; claws small with minute teeth near base (Fig. 5). (Legs very slender.) *Prosternal process* narrow but extending between front coxae to mesosternum when body is contracted. *Metasternum* convex (Fig. 3). *Length* 3.0–6.0 mm.

DISTRIBUTION. C. & E. Europe, Asia, Japan, NW. America (including Canada).

#### MATERIAL EXAMINED

7 species, including types of type species of *Celsus* (BMNH) and *Eurelymis* (MCZ) and 3 reliably identified specimens of the type species of *Semijulistus* (2 in MNHN). Also types of Pic's N. American species (MNHN).

REMARKS. This genus is included in the Rhadalinae by Majer (1983) although he regards the latter as a subgroup of the Dasytinae.

Although the distribution is so wide and the genus has been described three times, examination of the wing venation, mouthparts, genitalia etc. shows that the various elements are congeneric. The main difference between the Japanese species and the others is the shape of the apex of the last abdominal tergite in the female, but this is believed to be of only specific importance.

*Semijulistus* is closely related, and similar in appearance, to *Microjulistus* Reitter which is mainly from the Mediterranean region, Africa and western U.S.S.R. These genera have the basic characters of the Rhadalinae, but form a group apart from the other genera. They have a more slender, delicate appearance, are generally of smaller size with slender tarsi and recumbent pubescence and differ also in the form of the elytral epipleura. Most genera of the subfamily are generally larger and of stouter appearance and have longer, semi-erect or suberect setae.

*Semijulistus* differs from *Microjulistus* in its larger size, its unpunctured areas on the elytra of the female (in most species), its more strongly punctured pronotum, its lack of a linear lateral edge to the pronotum, its more convex metasternum, its apically divided tegmen, the fact that the pronotal sublateral setae point towards the disc and its distinct wing venation with an oval anal cell.

#### Checklist of species

*ater* (LeConte), 1878: 461 (from *Eurelymis*). N. America, Canada. **Comb. n.**

*bicoloripes* Pic, 1928a(431): 54 hors texte. N. America.

*callosus* (Solsky), 1867: 32 (*Dasytes*). U.S.S.R. (Turkestan).

*elongatus* (Nakane), 1981: 129 (from *Celsus*). Japan. **Comb. n.**

*flavipes* (LeConte), 1878: 461 (from *Eurelymis*). N. America. **Comb. n.**

*rubrithorax* Pic, 1928a(431): 54 hors texte. N. America.

*spectabilis* (Lewis), 1895: 119 (from *Celsus*). Japan. **Comb. n.**

*speculifer* (Casey), 1895: 603 (from *Eurelymis*). N. America. **Comb. n.**



**MICROJULISTUS** Reitter

(Figs 2, 4, 59)

*Microjulistus* Reitter, 1889a: 111. Type species: *Microjulistus fulvus* Reitter, 1889a: 112, by monotypy.  
*Ceralliscus* Bourgeois, 1894: 121. Type species: *Ceralliscus raffrayi* Bourgeois, 1894: 122, by monotypy.

Similar to *Semijulistus*, but smaller. Form delicate, with slender legs and recumbent, often scale-like, usually light brown or greyish setae which obscure cuticle.

*Head* as in *Semijulistus* but clypeus rather longer and more parallel-sided, frons without depressions or grooves; cuticle rugose, often obscured by setae, punctures obscure. Eyes oval, glabrous. Antennae and palps similar to those of *Semijulistus*, sensory surface of latter more strongly diagonal. *Pronotum* only weakly transverse, about as broad as elytra at base; sides smooth, not or scarcely crenulate, lateral margin not visible from above due to strong lateral convexity, but visible from beneath as a fine line, not bordered; anterior angles rounded or obsolete, posterior either rounded or obtuse; punctures confused, sometimes rimmed, cuticle rugose, mat; sublateral setae directed towards base (Fig. 2). *Scutellum* subquadrate but rounded apically. *Elytra* elongate, subparallel; sides smoothly curved, not visible from above; puncturation weak, particularly near apex, usually microreticulate between punctures; epipleura very short and narrow, visible from side, deflecting laterad anterior to level of hind coxae. Elytra of female as in male. *Hind wing* with weak venation, no anal cell and very long setae along costal margin (Fig. 59). *Prosternal process* as in *Semijulistus*. *Metasternum* flattened, with distinct median longitudinal groove (Fig. 4). *Length* under 3 mm.

DISTRIBUTION. Mediterranean, Africa (widespread but localised), Arabia, C. Europe, C. Asia.

## MATERIAL EXAMINED

8 named species, including reliably identified specimen of type species, and some material not determined at species level.

REMARKS. In Pic's catalogue (1937) this genus was regarded as a dasytine. Majer (1983) included it in the Rhadalinae although he regards the latter as a subgroup of the Dasytinae.

In the examples of *Microjulistus* examined, the tegmen is entire apically, not divided as it is in *Semijulistus*, and the dorsal appendage is less moveable.

**Checklist of species**

- chobauti* (Pic), 1895: 79. Algeria. (*Ceralliscus*)  
*duboisii* Peyerimhoff, 1931a: 51. Algeria.  
*fulvus* Reitter, 1889a: 112. U.S.S.R., Mongolia.  
*obscurithorax* Pic, 1905: 97. Turkestan.  
*moreli* (Pic), 1927: 10. (*Ceralliscus*)  
*pectoralis* (Pic), 1927: 10. (*Ceralliscus*)  
*rufithorax* (Pic), 1927: 10. (*Ceralliscus*)  
*gibbipennis* Chobaut, 1898: 80. S. Algeria.  
*laticollis* (Pic), 1894: 95. Algeria. (*Ceralliscus*)  
*lysholmi* Pic, 1898: 170, 171. Syria.  
*abdominalis* Pic, 1898: 170, 171.  
*nigripennis* Pic, 1898: 170, 171.  
*meyneri* Peyerimhoff, 1931a: 51. Algeria.  
*minutus* Pic, 1927: 5. Corsica.  
*nigricollis* (Pic), 1894: 95. Algeria. (*Ceralliscus*)  
*olivaceus* Pic, 1931c: 446. Ethiopia.  
*raffrayi* (Bourgeois), 1894: 122. Algeria. (*Ceralliscus*)  
*nigrifrons* (Pic), 1894: 95. (*Ceralliscus*)  
*rubricollis* (Abeille), 1907: XXII [reference not seen]. Arabia. (*Ceralliscus*)  
*subconvexus* Pic, 1903a: 179. S. Africa.  
*nigricolor* Pic, 1903a: 179.  
*fulvithorax* Pic, 1904b: 33.  
*wegeneri* Pic, 1898: 170. Egypt.  
*obscurus* Pic, 1898: 170, 171.

## Acknowledgements

I thank the following for the loan of specimens: Dr G. E. Ball, University of Alberta, Edmonton, Canada; Dr M. Brancucci, Naturhistorisches Museum, Basel, Switzerland; Dr H. Dybas, Field Museum of Natural History, Chicago, Illinois, U.S.A.; Dr L. H. Herman Jr, American Museum of Natural History, New York, U.S.A.; Dr D. H. Kavanaugh, California Academy of Sciences, San Francisco, California, U.S.A.; Dr J. M. Kingsolver, National Museum of Natural History, Smithsonian Institution, Washington D.C., U.S.A.; Dr K. Majer, Faculty of Forestry, University of Agriculture, Zemedelska, Brno, Czechoslovakia; Dr J. J. Menier, Muséum national d'Histoire naturelle, Paris, France; Dr T. Nakane, Kagoshima University, Korimoto, Kagoshima, Japan; Dr Scott R. Shaw and Ms M. K. Thayer, Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, U.S.A. I thank my colleagues Mr P. M. Hammond, Dr N. E. Stork, Dr R. B. Madge and Mr R. T. Thompson for reading the manuscript and offering helpful criticism and advice and the staff of the Scanning Electron Microscope Unit at the BMNH for their help in the production of the photographs.

## References

- Abeille de Perrin, E.** 1907. Sur les Dasytides nouveaux. *Annales de la Société des Sciences Naturelles de Provence* 1: xxi–xxiii. (Not seen.)
- Agassiz, L.** 1847 [dated 1846]. *Nomenclatoris Zoologici Index Universalis*. 393 pp. Soloduri.
- Alluaud, C.** 1898. Les Malacodermes des îles Mascareignes et Séchelles (Col.). *Bulletin de la Société Entomologique de France* 1: 99–104.
- Arnett, R. H. Jr** 1968. *The beetles of the United States*. 1112 pp. Michigan.  
— 1975 – see Blackwelder, R. E.
- Baudi a Selve, F.** 1873. Europeae et circummediterraneae Faunae Dasytidum et Melyridum specierum, quae Comes Dejean in suo Catalogo ed. 3a consignavit, ex ejusdem collectione in R. Taurinensi Musaeo asservata, cum auctorum bodierne recepta denominatione, collatio. *Berliner Entomologische Zeitschrift* 17: 293–316.
- 1873a. Coleopterorum messis in insula Cypro et Asia Minore ab Eugenio Truqui congregatae recensito: de Europaeis notis quibusdam additis. *Berliner Entomologische Zeitschrift* 17: 317–338.
- Berthold, A. A.** 1827. *Latreille's natürliche Familien des Thierreichs*. 8 & 602 pp. Weimar, Industr.-Compt.
- Blackwelder, R. E. & Arnett, R. H., Jr & Associates** 1975. *Checklist of the Beetles of Canada, United States, Mexico, Central America and the West Indies*. The Darkling Beetles, Ladybird Beetles and related groups. (Red Version). – North American Beetle Fauna Project 1(5), R61. 1-R102: 3.
- Blair, K. G.** 1935. Heteromera, Ptinidae, Dasytidae, and Bruchidae collected by Mr H. P. Thomasset and the late H. J. Snell in Rodriguez. *Annals and Magazine of Natural History* (10) 16: 264–273.
- Blaisdell, F. E.** 1938. A generic synopsis and generic revision of the Tribe Dasytini of North America, North of Panama. (Coleoptera: Melyridae). *Transactions of the American Entomological Society* 64: 1–31, pls 1, 2.
- Bourgeois, J.** 1894. Description d'un genre nouveau et d'une espèce nouvelle de Malacodermes d'Algérie. *Revue d'Entomologie* 13: 121–123.
- 1911. Description d'un nouvel *Haplocnemus* marocain. *Bulletin de la Société Entomologique de France* 1911: 158–160.
- Böving, A. G. & Craighead, F. C.** 1930–1931. An illustrated synopsis of the principal larval forms of the Order Coleoptera. *Entomologica Americana* (N.S.) 11: 1–351.
- Brisout de Barnville, C.** 1862. Espèces nouvelles de Coléoptères français. *Annales de la Société Entomologique de France* (4) 1 (1861): 597–606.
- Brullé, G. A.** 1832. *Expédition scientifique de Morée* 3 (1): 3–400, pls. Paris.
- Casey, T. L.** 1895. XV. Coleopterological Notices. *Annals of the New York Academy of Sciences* 8: 435–838.
- Champion, G. C.** 1913. III. Notes on various Central American Coleoptera, with descriptions of new genera and species. *Transactions of the Entomological Society of London* 1: 58–169.
- 1922. Some Indian Coleoptera. *Entomologist's Monthly Magazine* 58: 126–131.
- 1924. Coleoptera from the Seychelles. Lampyridae, Helodidae, Cantharidae, Melyridae and supplement to Cleridae. *Transactions of the Entomological Society of London* 1923: 295–304.
- Chobaut, A.** 1898. Description de quelques espèces et variétés nouvelles de Coléoptères algériens. *Revue d'Entomologie, Caen* 17: 74–88.
- Constantin, R.** 1965. Notes sur quelques Malacodermes du Nord de l'Espagne. *L'Entomologiste* 21: 87–94.
- Corporeaal, J. B.** 1950. In Junk, Cleridae. *Coleopterorum Catalogus* 23: 5–373.



- Costa, A.** 1882. Relazione di un Viaggio nelle Calabrie per Ricerche Zoologiche fatto nella state del 1876. *Atti della R. Accademia della Scienze Fisiche e Matematiche* **9** (6): 1–62.
- Crowson, R. A.** 1955. *The natural classification of the families of Coleoptera*. 187 pp. London.
- 1964. A review of the classification of Cleroidea (Coleoptera), with descriptions of two new genera of Peltidae and of several new larval types. *Transactions of the Royal Entomological Society of London* **116**: 275–327, 1 pl.
- 1970. Further observations on Cleroidea. *Proceedings of the Royal Entomological Society of London (B)* **39**: 1–20.
- 1981. *The biology of the Coleoptera*. 802 pp. London.
- Dejean, P. F. M. A.** 1821. *Catalogue de la Collection de Coléoptères de M. le Baron Dejean*. 136 pp. Paris.
- Desbrochers des Loges, J.** 1870. Descriptions de Coléoptères nouveaux d'Europe et confins. *Abeille. Journal d'Entomologie* **7**: 97–135.
- Deville, J. Sainte-Claire** 1908. Catalogue critique des Coléoptères de la Corse (suite). *Revue d'Entomologie, Caen* **27**: 217–272.
- Dufour, L.** 1851. XIII. Des zones entomologiques dans nos Pyrénées occidentales, et désignation des insectes qui les habitent. *Actes de la Société Linnéenne de Bordeaux* **17**: 304–364.
- Fabricius, J. C.** 1792. *Entomologiae Systematicae, Emendatae et Auctae* **1** (2): 538 pp. Hafniae.
- Fairmaire, L.** 1880. Diagnoses de Coléoptères de l'Île de la Réunion. *Le Naturaliste* **2**: 293.
- 1886. Notes sur les Coléoptères recueillis par M. Raffray, à Madagascar et Descriptions des espèces nouvelles. *Annales de la Société Entomologique de France* (6) **6**: 31–96.
- 1898. Matériaux pour la faune coléoptérique de la Région Malgache. *Annales de la Société Entomologique de Belgique* **42**: 463–499.
- 1901. Matériaux pour la faune coléoptérique de la Région Malgache. *Revue d'Entomologie, Caen* **20**: 101–248.
- Faldermann, F.** 1836. Fauna Entomologica Trans-Caucasica. 1. *Nouveaux Mémoires de la Société Impériale des Naturalistes de Moscou* **4**: 3–310, 10 pls.
- Germar, E. F.** 1817. *Reise nach Dalmatien und in das Gebiet von Ragusa* **2**: 1–325, 11 pls.
- 1824. *Insectorum species novae aut minus cognitae, descriptionibus illustratae*. **1**, Coleoptera: 1–624. Halae.
- Gorham, H. S.** 1886. Insecta, Coleoptera. *Biologia Centrali-Americana (Zoology)* **3** (2) (1880–86): 1–360.
- 1895. List of the Coleoptera in the collection of H. E. Andrewes Esq. from India and Burma, with descriptions of new species and notes. *Annales de la Société Entomologique de Belgique* **39**: 293–330.
- Guérin-Ménéville, F. E.** 1834 (1829–1858). *Iconographie du Règne Animal de G. Cuvier*: 5–576, 104 pls.
- Gyllenhal, L.** 1808. In Schönherr, C. J., *Synonymia Insectorum* **1** (2): 424 pp. Stockholm.
- Hatch, M. H.** 1962. *The beetles of the Pacific Northwest* **3** (1): 1–503. *University of Washington Publications in Biology* **16** (1961): 1–503.
- Hinton, H. E.** 1934. A new melyrid from Mexico (Coleoptera: Melyridae). *The Canadian Entomologist* **66**: 21–22.
- Holdhaus, C.** 1923. Elenco dei coleotteri dell'isola d'Elba, con studii sul problema della Tirennide. *Memorie della Società Entomologica Italiana* **2**: 77–176, 7 figs.
- Illiger, K.** 1807. IX. Nachlese zu den Bemerkungen, Berichtigungen und Zusätzen zu Fabricii *Systema Eleutheratorum*. Tomus II. *Magazin für Insektenkunde* **6**: 296–317.
- Kiesenwetter, H. von** 1859. Beitrag zur Käferfauna Griechenlands. *Berliner Entomologische Zeitschrift* **3**: 158–192.
- 1861. Eine entomologische Excursion in das Wallis und nach dem Monte Rosa in Sommer 1861. *Berliner Entomologische Zeitschrift* **5**: 360–395.
- 1863. In Erichson, *Naturgeschichte der Insecten Deutschlands*. Coleoptera **4**: 569–746. Berlin.
- 1865. Eine entomologische Excursion nach Spanien im Sommer 1865. *Berliner Entomologische Zeitschrift* **9**: 359–396.
- 1867. Beiträge zur Käferfauna Spaniens. *Berliner Entomologische Zeitschrift* **11**: 109–134.
- 1871. Beiträge zur Kenntniss der Malacodermen-Fauna von Corsica, Sardinien und Sicilien. *Berliner Entomologische Zeitschrift* **15**: 75–88.
- Kocher, L.** 1962. Coléoptères nouveaux ou intéressants du Maroc présaharien. *Bulletin de la Société des Sciences Naturelles du Maroc* **42**: 195–214.
- Küster, H. C.** 1849. *Die Käfer Europa's* **19**: nos 1–100. Nürnberg.
- Laporte de Castelnau, F. L.** 1840. *Histoire naturelle des insectes*. Coléoptères **1**: i–cxxx, 1–324. Paris.
- Latreille, M.** 1829. In Cuvier, *Le Règne Animal*, edn 2, **4**: 584 pp. Paris.
- Lawrence, J. F.** 1982. *Synopsis and classification of living organisms*, Coleoptera **2**: 482–553. U.S.A.
- Leach, W. E.** 1815. *Brewster's Edinburgh Encyclopaedia*. Article: *Entomology* **9** (1): 57–172. Edinburgh.

- LeConte, J. L.** 1852. Descriptions of new species of Coleoptera, from California. *Annals of the Lyceum of Natural History of New York* **5**: 125–216.
- 1861. *Classification of the Coleoptera of North America* **1**: vii–xxv, 1–286. Washington.
- 1878. Art. XX. The Coleoptera of the Alpine regions of the Rocky Mountains. *Bulletin of the United States Geological and Geographical Survey of the Territories* **4**: 447–480.
- LeConte, J. L. & Horn, G. H.** 1883. *Classification of the Coleoptera of North America*: iii–xxxviii, 1–567. Washington.
- Leech, H. B.** 1931. Coleoptera by ‘smoking’ stumps. *Bulletin of the Brooklyn Entomological Society* **26**: 12.
- Lewis, G.** 1895. On the Dascillidae and malacoderm Coleoptera of Japan. *Annals and Magazine of Natural History* (6) **16**: 98–122, pl. 6, fig. 11.
- Liberti, G.** 1984. *Dasytes* (*Mesodasytes*) of Taiwan (Coleoptera, Dasytidae) (part 2). *Entomologica Basiliensia* **9**: 324–327.
- Lindberg, H.** 1953. Zweiter Beitrag zur Kenntnis der Käferfauna der Kanarischen Inseln. *Commentationes Biologicae* **13** (12): 1–18.
- Lohse, G. A.** 1977. Die mitteleuropäischen Arten der Gattung *Haplocnemus* Steph. sowie synonymische Bemerkungen zu anderen Melyriden. *Entomologische Blätter für Biologie und Systematik der Käfer* **73**: 175–183.
- 1979. Part 30, Familie: Melyridae (Dasytidae), pp. 69–83. In Freude, H., Harde, K. W. & Lohse, G. A., *Die Käfer Mitteleuropas* **6**: 1–367.
- Lucas, (P.) H.** [1846–] 1849. Histoire naturelle des animaux articulés. 2. Insectes. *Exploration scientifique de l’Algérie de pendant les années 1840, 1841, 1842*: 3–590.
- Majer, K.** 1982. Species of the genus *Aplocnemus* of Middle Europe (Col. Melyridae). *Deutsche Entomologische Zeitschrift* (N.F.) **29**: 421–445.
- 1983. A new genus and species of Dasytinae from Central Asia (Coleoptera, Melyridae). *Acta Entomologica Bohemoslovaca* **80**: 385–389.
- 1985. Supplementary notes to ‘Species of the genus *Aplocnemus* of Middle Europe’. (Col. Melyridae.) *Deutsche Entomologische Zeitschrift* (N.F.) **32**: 1–3, 35–41.
- 1986. Dasytinae from Mongolia (Coleoptera: Melyridae). *Acta Zoologica Hungarica* **32**: 303–315.
- 1987. Comparative morphology and proposed major taxonomy of the family Melyridae (Insecta, Coleoptera). *Polskie Pismo Entomologiczne* **56**: 719–859.
- Marcu, O.** 1936. Ein neuer *Haplocnemus* (*H. strandi* nov.) aus der Bucovina. *Festschrift zum 60. Geburtstag von Dr Embrik Strand* **1**: 518.
- Marsham, T.** 1802. *Coleoptera Britannica*. 547 pp. London.
- Miller, L.** 1862. Ergebnisse einer entomologischen Reise nach Cephalonia. *Wiener Entomologische Monatschrift* **6**: 341–355.
- 1866. Neue Käfer-Arten. *Verhandlungen des Zoologisch-Botanischen Gesellschaft in Wien* **16**: 817–820.
- Motschulsky, V. de** 1850. Letter in *Bulletin de la Société Imperiale des Naturalistes de Moscou* **23** (3): 351–368.
- Mulsant, E. & Rey, C.** 1868. Floricoles. *Histoire Naturelles des Coléoptères de France*. 315 pp., 19 pls.
- Nakane, T.** 1981. New or little-known Coleoptera from Japan and its adjacent regions, XXXIII. *Fragmenta Coleopterologica Japonica*, pars 29–32: 125–130.
- Olivier, M.** 1790. *Entomologie, ou Histoire naturelles des Insectes*. Coléoptères **2**: 21. Paris.
- Perris, E.** 1869. Descriptions de quelques Coléoptères nouveaux, rectifications et notes. *Abeille. Journal d’Entomologie* **7**: 3–37.
- Peyerimhoff, P. de** 1929. Nouveaux Coléoptères du Nord-Africain. Soixante et Onzième note: Faune du Hoggar et des massifs voisins (suite). *Bulletin de la Société Entomologique de France* **12**: 191–194.
- 1931. Nouveaux Coléoptères du Nord-Africain. *Annales de la Société Entomologique de France* **100**: 1–20.
- 1931a. Mission scientifique du Hoggar. Coléoptères. *Mémoires de la Société d’Histoire Naturelle de l’Afrique du Nord* **2**: 1–172.
- Pic, M.** 1894. Sur le genre *Ceralliscus* Bourg. *Échange. Revue Linnéenne* **10**: 95–96.
- 1894a. Notes sur Quelques Dasytides d’Algérie. *Échange. Revue Linnéenne* **10**: 111–112.
- 1895. Descriptions de Coléoptères d’Algérie. *Échange. Revue Linnéenne* **11**: 78–81.
- 1896. Diagnoses de Dasytides divers (in collection Pic). *Miscellanea Entomologica* **4**: 47–48.
- 1897. Descriptions de Coléoptères. *Miscellanea Entomologica* **5**: 41–43.
- 1898. Nouvelle étude synoptique sur le genre *Microjulistus* Reitt. (*Ceralliscus* Bourg.) (Coléoptères). *Feuille des Jeunes Naturalistes* (3) **29**: 169–171.
- 1899. Diagnoses de Coléoptères d’Orient. *Bulletin Société d’Histoire Naturelle d’Autun* **12**: 252–261.



- 1900. Contribution à l'étude des Coléoptères de la Tripolitaine et la Tunisie. *Bulletin de la Société Entomologique de France* **1900**: 164–166.
- 1901. Notes diverses et diagnoses. *Échanges. Revue Linnéenne* **17**: 9–12, 17–20.
- 1902. Nouvelles espèces et variétés de Coléoptères paléarctiques. *Échange. Revue Linnéenne* **17**: 31–33.
- 1902a. *Journ. Ins. Nat.* **2**: 60. (Reference not found.)
- 1903. Nouveaux Coléoptères provenant de Madagascar. *Bulletin de la Société Entomologique de France* **1903**: 143–146.
- 1903a. Nouveaux Coléoptères africains. *Échange. Revue Linnéenne* **19**: 178–181.
- 1904. Coléoptères africains nouveaux. *Échange. Revue Linnéenne* **20**: 11–12.
- 1904a. Diagnoses de Malacodermes africains et américains. *Échange. Revue Linnéenne* **20**: 27–29.
- 1904b. Diagnoses de Coléoptères paléarctiques et exotiques. *Échange. Revue Linnéenne* **20**: 33.
- 1905. Espèces et variétés nouvelles de Coléoptères paléarctiques. *Échange. Revue Linnéenne* **21**: 97–100.
- 1906. Contribution à l'étude du genre '*Xamerpus*' Fairmaire. *Échange. Revue Linnéenne* **22**: 6–8.
- 1906a. Nouveaux Coléoptères d'Europe, Asie, Afrique et Amérique. *Échange. Revue Linnéenne* **22**: 9–12.
- 1908. Deux *Haplocnemus* Steph. algériens nouveaux. *Bulletin de la Société Entomologique de France* **1908**: 200.
- 1908a. Descriptions ou diagnoses et notes diverses. *Échange. Revue Linnéenne* **24**: 49–52, 81–83, 89–91.
- 1909. Descriptions ou diagnoses et notes diverses. *Échange. Revue Linnéenne* **25**: 97–100, 105–106, 113–115.
- 1910. Descriptions ou diagnoses et notes diverses. *Échange. Revue Linnéenne* **26**: 9–11.
- 1911. Descriptions ou diagnoses et notes diverses. *Échange. Revue Linnéenne* **27**: 145–146, 169–170.
- 1913. Notes diverses, descriptions et diagnoses. *Échange. Revue Linnéenne* **28**: 105–106.
- 1913a. Espèces et variétés nouvelles, ou peu connus, rentrant dans diverses familles. *Mélanges Exotico-Entomologiques* **7**: 10–20.
- 1914. Notes diverses, descriptions et diagnoses. *Échange. Revue Linnéenne* **30**: 57–59.
- 1914a. Descriptions abrégées de Malacodermes et Heteromères. *Mélanges Exotico-Entomologiques* **11**: 8–20.
- 1915. Notes diverses, descriptions et diagnoses. *Échange. Revue Linnéenne* **31**: 21–22.
- 1916. Diagnoses génériques et spécifiques. *Mélanges Exotico-Entomologiques* **18**: 2–20.
- 1917. Descriptions abrégées diverses. *Mélanges Exotico-Entomologiques* **26**: 2–24.
- 1918. Contribution à l'étude des Dasytides. *Échange. Revue Linnéenne* **34**: hors texte, 1–12.
- 1919. Malacodermes africains. *Mélanges Exotico-Entomologiques* **31**: 1–11.
- 1921. Notes diverses, descriptions et diagnoses. *Échange. Revue Linnéenne* **37**: 1–16.
- 1922. Notes diverses, descriptions et diagnoses. *Échange. Revue Linnéenne* **38**: 17–19, 25–28.
- 1925 (1924). Missione zoologica del Dr E. Festa in Cirenaica. XII. Coléoptères nouveaux de Cyrénaïque. *Bollettino dei Musei di Zoologia ed Anatomia Comparata della R. Università di Torino (N.S.)* **39** (20): 1–3.
- 1926. Malacodermes exotiques. *Échange. Revue Linnéenne* **42**: hors texte, 1–36.
- 1926a. In Junk, Phloeophilidae, Rhadalidae, Prionoceridae. *Coleopterorum Catalogus* **87**: 1–11.
- 1927. Notes diverses, descriptions et diagnoses. *Échange. Revue Linnéenne* **43**: 5–7, 9–11, 13–14.
- 1928. Coléoptères nouveaux de la Cyrénaïque. *Bollettino della Società Entomologica Italiana* **60**: 103–105.
- 1928a. Notes diverses, descriptions et diagnoses. *Échange. Revue Linnéenne* **44**: hors texte, 37–136.
- 1929. Coléoptères nouveaux de la Cyrénaïque. *Bollettino della Società Entomologica Italiana* **61**: 94–96.
- 1929a. In Junk, Dasytidae: Melyrinae. *Coleopterorum Catalogus* **103**: 3–32.
- 1929b. Notes diverses, nouveautés. *Échange. Revue Linnéenne* **45**: 1–2.
- 1930. Notes diverses, nouveautés. *Échange. Revue Linnéenne* **46**: 1–3.
- 1931. Nouveaux Coléoptères d'Italie. *Bollettino della Società Entomologica Italiana* **63**: 159.
- 1931a. Nouveaux Coléoptères (1re Note). *Bulletin du Muséum National d'Histoire Naturelle* **3**: 106–109.
- 1931b. Nouveaux Coléoptères de Madagascar. *Bulletin du Muséum National d'Histoire Naturelle* **3**: 440–443.
- 1931c. Nouveaux Coléoptères (2e Note). *Bulletin du Muséum National d'Histoire Naturelle* **3**: 444–449.

- 1931*d*. Notes diverses, nouveautés. *Échange. Revue Linnéenne* **46–47**: hors texte, 37–136.
- 1932. Coléoptères des Iles Mascareignes. Mission scientifique de P. Carié (1910–1913). Malacodermes, Ptinides, Anthicidés et Hylophilides. *Annales de la Société Entomologique de France* **101**: 40–54.
- 1932*a*. Diagnoses préliminaires. *Échange. Revue Linnéenne* **48**: 26–28.
- 1932*b*. Neue exotische Coleopteren (Malacodermata) II. *Entomologischer Anzeiger* **12**: 250–255.
- 1934. Notes diverses, nouveautés. *Échange. Revue Linnéenne* **50**: 21–22.
- 1935. Malacodermes exotiques nouveaux. *Annales de la Société Entomologique de France* **104**: 116.
- 1935*a*. Nouveaux Coléoptères de l'Ile Maurice. *Bulletin de la Société Entomologique de France* **40**: 12–14.
- 1935*b*. Notes diverses, nouveautés. *Échange. Revue Linnéenne* **51**: 13–15.
- 1935*c*. Neue Malacodermata (Coleopteren). *Entomologischer Anzeiger* **15**: 253–256.
- 1937. In Junk, Dasytidae: Dasytinae. *Coleopterorum Catalogus* **155**: 3–128.
- 1938. Helodide et Malacodermes nouveaux d'Afrique (Coléoptères). *Annals and Magazine of Natural History* (11) **2**: 300–302.
- 1938*a*. Malacodermes exotiques. *Échange. Revue Linnéenne* **54**: 149–164, hors texte.
- 1939. Malacodermes exotiques. *Échange. Revue Linnéenne* **55**: 165–172, hors texte.
- 1941. *Opuscula Martialialis (Martialia)* (*Échange. Revue Linnéenne, (Numero special)*) **4**: 1–16. Moulins.
- 1944. Coléoptères du globe. *Échange. Revue Linnéenne* **60**: 10–12.
- 1948. Coléoptères du globe. *Échange. Revue Linnéenne* **64**: 6–16.
- 1949. Nouveaux Coléoptères du Maroc. *Bulletin de la Société des Sciences Naturelles du Maroc* **29**: 73–75.
- 1953. Trois Coléoptères nouveaux d'Espagne. *Archivos del Instituto de Aclimatacion* **1**: 143–144.
- 1953*a*. Coléoptères nouveaux de Madagascar. *Mémoires de l'Institut Scientifique de Madagascar* (E) **3**: 253–278.
- 1954. Dasytidae of the Sierra Nevada, Spain. In Mateu, *Archivos del Instituto de Aclimatacion* **2**: 97–98.
- 1954*a*. Nouveaux Coléoptères de diverses familles. *Revue de Zoologie et de Botanique Africaines* **50**: 210–215.
- 1955. Coléoptères Malacodermes nouveaux de la Cyrénaïque. *Atti del Museo Civico di Storia Naturale di Trieste* **20**: 131–132.
- 1958. La réserve naturelle intégrale du Mont Nimba, VIII, Coléoptères nouveaux. *Mémoires de l'Institut Français d'Afrique Noire* **53**: 199–207.
- Pope, R. D.** 1977. In Kloet, G. S. & Hincks, W. D., A check list of British insects (edn 2). *Handbooks for the Identification of British Insects* **11** (3): xiv + 105 pp.
- Ragusa, E.** 1872. *Haplocnemus trinacriensis*. *Bollettino della Società Entomologica Italiana* **4**: 83.
- Redtenbacher, L.** 1849. *Fauna Austriaca*: iii–xxvii, 1–883. Wien.
- Reitter, E.** 1885. Neue Coleopteren aus Europa und den angrenzenden Ländern, mit Bemerkungen über bekannte Arten. *Deutsche Entomologische Zeitschrift* **29**: 355–392.
- 1889. Neue Coleopteren aus Europa, den angrenzenden Ländern und Sibirien, mit Bemerkungen über bekannte Arten. *Deutsche Entomologische Zeitschrift* **33**: 17–44.
- 1889*a*. Coleopterologische Ergebnisse der im Jahre 1886 und 1887 in Transcaspien von Dr G. Radde, Dr A. Walter und A. Konchin ausgeführten Expedition. *Verhandlungen des Naturforschenden Vereins in Brünn* **27**: 95–133.
- 1890. Neue Coleopteren aus Europa, den angrenzenden Ländern und Sibirien, mit Bemerkungen über bekannte Arten. *Deutsche Entomologische Zeitschrift* **1**: 145–176.
- 1902. Uebersicht der Arten der Coleopteren-Gattung *Trichoceble* Thoms. *Wiener Entomologische Zeitung* **21**: 257–261.
- Rosenhauer, W. G.** 1856. *Die Thiere Andalusiens*. 17–406 [insect pp.] Erlangen, Blaesing.
- Rottenberg, A. v.** 1870. Beiträge zur Coleopteren-Fauna von Sicilien. *Berliner Entomologische Zeitschrift* **14**: 235–260.
- Sahlberg, C. R.** 1822 (1817–1834). *Insecta Fennica* **1**: i–viii, 1–519.
- Sahlberg, J.** 1913. Coleoptera mediterranea et rosso-asiatica nova et minus cognita. *Öfversigt af Finska Vetenskaps-Societetens Forhändlingar* **55** (8): 1–88.
- Schenkling, S.** 1922. Coleoptera: Cleridae. *Transactions of the Linnean Society of London* (2) **18**: 325–329.
- Schilsky, J.** 1894. Beitrag zur Kenntniss der Dasytinen. *Deutsche Entomologische Zeitschrift* **38**: 225–236.
- 1894*a*. IX. Beitrag zur deutschen Käferfauna. *Deutsche Entomologische Zeitschrift* **38**: 329–336.
- 1894*b*. In Küster & Kraatz, *Die Käfer Europa's* **30**: nos 1–100. Nürnberg.



- 1895. In Küster & Kraatz, *Die Käfer Europa's* **31**: nos 17, 18. Nürnberg.
- 1896. In Küster & Kraatz, *Die Käfer Europa's* **32**: nos 1–100, 32A–Q. Nürnberg.
- 1897. *Trichoceble heydeni* n. sp. aus China. *Deutsche Entomologische Zeitschrift* **1**: 155.
- 1897a. In Küster & Kraatz, *Die Käfer Europa's* **33**: nos 81–100. Nürnberg.
- 1897b. In Küster & Kraatz, *Die Käfer Europa's* **34**: nos 1–100, 34A–34BBB. Nürnberg.
- 1900. In Küster & Kraatz, *Die Käfer Europa's* **37**: no. 4. Nürnberg.
- 1903. In Küster & Kraatz, *Die Käfer Europa's* **40**: nos 97, 98. Nürnberg.
- 1906. In Küster & Kraatz, *Die Käfer Europa's* **42**: nos 99, 100; **43**: nos 13–17. Nürnberg.
- Schönherr, C. J.** 1817. *Synonymia Insectorum* **1** (3): iii–xi, 1–266. Skara.
- Solsky, S.** 1867. Coléoptères nouveaux. *Horae Societatis Entomologicae Rossicae* **5**: 29–37.
- Stephens, J. F.** 1829. *A Systematic Catalogue of British Insects*. 388 pp. London.
- 1830. *Illustrations of British Entomology*. Mandibulata **3**: 1–374, index, pls 16–19. London.
- Suffrian, E.** 1843. Entomologische Bemerkungen. *Stettiner Entomologische Zeitung* **4**: 330–337.
- Thomson, C. G.** 1859. *Skandinaviens Coleoptera* **1**: 290 pp. Lund.
- Vinson, J.** 1946. The Dasytidae of the Mascarene Islands. *Mauritius Institute Bulletin* **2**: 249–277.
- 1953. Coléoptères nouveaux ou peu connus de l'île de la Réunion. *Bulletin de la Société Entomologique de France* **58**: 143–146.
- 1957. On two species of *Pelecophora* from Round Island with the description of a larva of this genus (Col. Dasytidae). *Mauritius Institute Bulletin* **5**: 1–6.
- 1958. Catalogue of the Coleoptera of Mauritius and Rodriguez, Part 2. *Mauritius Institute Bulletin* **4**: 75–130.
- 1967. Liste chorologique des Coléoptères des Mascareignes. *Mauritius Institute Bulletin* **4**: 299–394.
- Waterhouse, C. O.** 1876. New species of Coleoptera from the Island of Rodriguez, collected by the naturalists accompanying the Transit-of-Venus Expedition. *Annals and Magazine of Natural History* (4) **18**: 105–121.
- Watt, J. C.** 1975. Notes on priority of family-group names in Coleoptera. *The Coleopterists Bulletin* **29**: 31–34.
- Wittmer, W.** 1935. Risultati Scientifici delle cacce entomologiche di S.A.S. il Principe Alessandro della Torre e Tasso. II. Malacodermata. *Bollettino de R. Laboratorio di Entomologia Agraria di Portici* **28**: 247–256.
- 1938. Zur Kenntnis der Malacodermata Aegyptens. *Bulletin Société Entomologique d'Egypte* **21** (1937): 167–170.
- 1940. Neue Malacodermata aus der Sammlung des Museum Heude, Shanghai. *Notes d'Entomologie Chinoise* **7**: 99–108.
- 1941. Malacodermata von den Philippinen aus der Sammlung des zoologischen Museums in Amsterdam. *Philippine Journal of Science* **74**: 195–229.
- 1953. Beitrag zur Kenntnis der Malacodermata Afrikas (Col.). *Mitteilungen der Schweizerischen Entomologischen Gesellschaft* **26**: 281–286.
- 1984. Die Gattung *Pelochrus* Muls. in Südafrika (Coleoptera: Malachiidae) und eine mit ihr verwandte neue Gattung. *Annals of the Transvaal Museum* **33**: 365–390.
- Wollaston, T. V.** 1862. XXXI. On the Canarian Malacoderms. *Journal of Entomology* **1**: 421–450.
- Yablokov-Khnzoryan, S. M.** 1978. A new species of Dasytidae – beetles from the Armenian Soviet Socialist Republic. *Doklady Akademii Nauk Armyanskoi SSR* **67**: 243–245. [In Russian with Armenian summary.]

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